

IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF IOWA  
WESTERN DIVISION

RONALD KUIPER and  
CONLEY KUIPER,

No. C06-4009-MWB

Plaintiffs,

Sioux City, Iowa  
March 3, 2009  
8:02 a.m.

vs.

GIVAUDAN FLAVORS CORP.,

VOLUME 9 OF 12

Defendant.

/

TRANSCRIPT OF TRIAL  
BEFORE THE HONORABLE MARK W. BENNETT  
UNITED STATES DISTRICT JUDGE, and a jury.

## APPEARANCES:

## For the Plaintiffs:

KENNETH BLAIR MCCLAIN, ESQ.  
STEVEN EDWARD CRICK, ESQ.  
SCOTT A. BRITTON-MEHLISCH, ESQ.  
Humphrey, Farrington & McClain  
Suite 400  
221 West Lexington  
Independence, MO 64050

DENNIS M. MCELWAIN, ESQ.  
Smith & McElwain  
Suite 530  
505 Fifth Street  
Sioux City, IA 51101

## For the Defendant:

JAMES D. PAGLIARO, ESQ.  
KEVIN M. DONOVAN, ESQ.  
THOMAS J. SULLIVAN, ESQ.  
Morgan, Lewis & Bockius  
1701 Market Street  
Philadelphia, PA 19103-2921

V. THOMAS MEADOR, ESQ.  
MICHAEL T. ZARRO, ESQ.  
Morgan, Lewis & Bockius  
Suite 2200  
300 South Grand Avenue  
Los Angeles, CA 90071-3132

STEPHEN J. HOLTMAN, ESQ.  
Simmons Perrine  
Suite 1200  
115 Third Street Southeast  
Cedar Rapids, IA 52401-1266

## Court Reporter:

Shelly Semmler, RMR, CRR  
320 Sixth Street  
Sioux City, IA 51101  
(712) 233-3846

1           (Proceedings reconvened outside the presence of the  
2 jury.)

3           THE COURT: Okay. Good morning. We have the Rule 50  
4 motion. I've read it. Anything you want to add to it?

5           MR. DONOVAN: Your Honor, we have made the basic  
6 arguments in the document. I'm glad to restate those, to  
7 emphasize a few of them, or to respond to any questions Your  
8 Honor may have regarding the arguments.

9           THE COURT: Well, it's like we're trying two different  
10 cases, the one I see and the one you see, so no point adding  
11 anything for my benefit. I find the motion inconceivable.

12          MR. DONOVAN: Your Honor, do you want me for the  
13 record --

14          THE COURT: It's not the case I'm trying. Might be a  
15 canned brief for some other case but not the case I'm trying, so  
16 motion's denied. Anything else?

17          MR. DONOVAN: No, Your Honor.

18          THE COURT: Now, on the jury instructions issue, I am  
19 not reinstructing, so to the extent you're asking me -- I'm not  
20 sure what you're asking me to reinstruct on. I've never  
21 reinstructed on a case. I've tried hundreds of cases this way.  
22 Never once I've been asked to reinstruct, and if I had been  
23 asked to reinstruct in every case, I would have said no.  
24 There's absolutely no reason to reinstruct.

25          Again, you're like the -- you're the team who cried

1 wolf. You're saying if I give one supplemental instruction that  
2 somehow you're going to be prejudiced just like you'd be  
3 prejudiced if you hadn't have done cumulative testimony on your  
4 witness yesterday, just like -- you know, everything that  
5 doesn't go your way, it's a scream of prejudice.

6 And so you really are like the team who cried wolf.  
7 That is in my opinion about as ludicrous an objection as I've  
8 seen in 15 years.

9 Now, if there are other things that need further  
10 supplemental instruction, I'm open to that. I'm open to that.  
11 I'm not -- but to say that -- I don't -- and I didn't understand  
12 even what your objection was to my supplemental instruction.  
13 It's not an incorrect statement of the law. Or are you claiming  
14 that it is?

15 MR. DONOVAN: Your Honor, our position was that the  
16 instruction that was given is consistent with the standard  
17 instruction in the law and does adequately cover the fact of  
18 what a manufacturer knew or should have known and there has been  
19 evidence on that.

20 And in addition, in the wake of the Wright decision,  
21 it is not clear that this remains a part of kind of the  
22 formulation of what is considered in determining design defect  
23 and failure to warn. We felt the instruction as given  
24 adequately met both what the parties had requested initially and  
25 what the standard instruction included, and that was the main

1 basis for the objection to it.

2 THE COURT: Well, are you saying it's a wrong  
3 statement of the law?

4 MR. DONOVAN: I think it's -- I think it's somewhat  
5 unclear in the wake of Wright whether there's been any case law  
6 addressing that. It was certainly the statement that was  
7 formulated in Olson as Your Honor noted and has been applied by  
8 Your Honor I know in pre-Wright cases. So that was the basis.

9 And we also objected just on the fact that it tends to  
10 bring to the front at the end one aspect of this broader  
11 determination as opposed to, you know, other aspects that are  
12 significant in the jury's consideration. So in that sense we  
13 thought it unduly emphasized one piece of this.

14 THE COURT: Well, then I can put some language in  
15 there "You should take this along with all of the instructions  
16 and treat them as a whole" language. Doesn't that obviate any  
17 concern you would have about that it calls special attention to  
18 it?

19 MR. DONOVAN: I think, Your Honor --

20 THE COURT: What do you want me to do? Read them all  
21 over again?

22 MR. DONOVAN: Well, we did -- we filed, Your Honor, a  
23 short -- in response to your request a document with briefing on  
24 the two proposed supplemental instructions that Your Honor had  
25 raised last week. And we also proposed several clarifying

1 instructions additionally. We believe that it would make the  
2 most sense to recharge on this. We understand that that's a  
3 significant amount of time, but we feel it brings a couple of  
4 different aspects out of -- kind of pulls them out and puts them  
5 in front of the jury at the end of the case when it's --

6 THE COURT: Well, if you tell them you should treat  
7 any supplement -- I told them at the beginning that there might  
8 be supplemental instructions. So if you tell them that you  
9 should just treat the supplemental instructions as they do all  
10 the other instructions and treat them as a whole, how can there  
11 possibly -- I -- do you have any evidence that there would be  
12 any prejudice?

13 MR. DONOVAN: No, Your Honor.

14 THE COURT: Well, what's your basis for the argument  
15 that there would be prejudice?

16 MR. DONOVAN: Just the primacy of the one statement  
17 versus the distant instruction prior to that and the fact that  
18 Your Honor is focusing on those.

19 THE COURT: Okay. Well, I told everybody and I told  
20 the jury that I was going to read their instruction on duty on  
21 deliberations and I save that for last until after closing  
22 argument. Is that prejudicial?

23 MR. DONOVAN: No, Your Honor, I don't believe so,  
24 because it doesn't go to the substance of the jury's  
25 determinations.

1           THE COURT: But they're not going to focus more on  
2 that instruction than the other instructions because it's given  
3 last?

4           MR. DONOVAN: I understand -- I do understand the  
5 point Your Honor's making, that there are issues where it may be  
6 appropriate to make a final instruction. Our concern is just  
7 raising, you know, facets of this at the end out of the context  
8 of the other instructions.

9           THE COURT: And then you filed an extensive document  
10 with the -- about the depositions that were read, and I assume  
11 that's just -- for whatever reason you didn't think Rule 103  
12 preserved your rights on your motion in limine, so then you're  
13 filing this supplemental document? Is that it?

14          MR. DONOVAN: We were just trying to make a record,  
15 Your Honor, of what has gone in since it's not transcribed  
16 testimony and which parts were subject to prior objections. We  
17 do agree on -- Rule 103 does talk about pretrial rulings. The  
18 case law's not entirely clear, and we wanted to just be sure we  
19 were all clear and we put our objections on the record.

20          THE COURT: But there isn't anything that I need to do  
21 with regard to that.

22          MR. DONOVAN: I don't believe so, Your Honor.

23          THE COURT: You're not asking me to do anything.

24          MR. DONOVAN: No, I believe you already ruled on these  
25 issues.

1           THE COURT: Okay. Well, I'll -- I guarantee you I'm  
2 not going to recharge the jury, but to the extent that you're  
3 asking for other supplemental instructions or clarifications to  
4 be given with what I've indicated I'm probably going to do and  
5 I've got another one for you on punitive damages that I'm still  
6 working on, I have an open mind on looking at those.

7           MR. DONOVAN: Your Honor, we had filed that document.  
8 Should we also transmit that to you or your clerk via e-mail,  
9 the document with the proposed supplements?

10          THE COURT: I'm sorry. What did you say?

11          MR. DONOVAN: We filed a -- we filed a document as  
12 Your Honor had requested with case law on the proposed  
13 supplements that Your Honor had indicated you might give last  
14 week separate from the Rule 50 motion.

15          THE COURT: Right.

16          MR. DONOVAN: And in that we had several supplements  
17 requested, and I wanted to make sure Your Honor had that or  
18 whether we should transmit that to your --

19          THE COURT: No, I have it. What'd you call that one?  
20 Let me just see. You called it objections to jury instructions.

21          MR. DONOVAN: Supplemental objections, yes, Your  
22 Honor.

23          THE COURT: Supplemental objections to the Court's  
24 jury instructions, yeah. That's document 365.

25          MR. DONOVAN: Yes, Your Honor.



1 THE COURT: Yes, I do have that. Thank you.

2 MR. DONOVAN: Thank you, Your Honor.

3 THE COURT: Yeah. And that's the one I was referring  
4 to that I have an open mind on. I mean, I'm not going to  
5 recharge the jury. I'm just not going to do it. These are the  
6 longest instructions I've ever given. I've tried a lot more  
7 complicated cases than this but largely on -- well, I'm not  
8 going to visit old ground. But no, the answer is I'm not going  
9 to recharge them.

10 MR. DONOVAN: Thank you, Your Honor.

11 THE COURT: They've had the instructions for two weeks  
12 going on a third week now so . . .

13 But I will take a look at your request for additional  
14 clarifying instructions.

15 MR. DONOVAN: Thank you.

16 THE COURT: That's still on the table.

17 MR. DONOVAN: Thank you, Your Honor.

18 THE COURT: Thanks. And I'll probably want to talk to  
19 you about them, so maybe we could do that -- is my sentencing at  
20 three o'clock or four o'clock today, Nick? Do you know?

21 THE CLERK: You have a three and a four o'clock  
22 hearing today.

23 THE COURT: Yeah, I've got a hearing on a civil case  
24 at four. I can't do it today. Maybe tomorrow.

25 MR. DONOVAN: Yes, Your Honor.

1 THE COURT: Thanks. Anything else we need to take up?

2 MR. MEADOR: No, Your Honor.

3 MR. MCCLAIN: Just a matter of housekeeping. I  
4 don't -- we're not getting these filings. I don't know who  
5 they're going to. They might have been, you know -- they might  
6 have been going to Chris Miller or somebody, but Steve and I  
7 don't get any of these filings.

8 THE COURT: Well, when they file electronically, you  
9 get a notice of it.

10 MR. MCCLAIN: Yes.

11 THE COURT: But they're not sending you courtesy  
12 copies?

13 MR. MCCLAIN: Yeah. Somehow that's not happening. If  
14 we could get a copy of them, I'd appreciate it. I'm not -- I'm  
15 just -- I'm not complaining. I'm just asking. Something's  
16 falling through the cracks. But the other night when you sent  
17 an e-mail, we didn't get it for several hours because it kind of  
18 went around the horn and we had to wait for Mr. Meador to  
19 respond to you and then trace back the e-mail chain. Somehow  
20 Mr. Crick and I are being left off.

21 THE COURT: Maybe it's a sign.

22 MR. MCCLAIN: It could be. Most of it takes care of  
23 itself it seems.

24 THE COURT: Well, yeah. I don't know. I just make  
25 sure that when I send an e-mail I've got everybody in the

1 address queue, you know, and then how fast it gets to people --  
2 I do have a lot of power, but I don't have any control over that  
3 so . . .

4 MR. MCCLAIN: Well, we'll check with Nick. I was just  
5 reminded of that today when he was speaking, but I'll make sure  
6 at the end of the day that Nick has -- make sure that our  
7 addresses are right there because . . .

8 THE COURT: Anything else?

9 MR. MEADOR: No, Your Honor.

10 THE COURT: Anything you can foresee today that's  
11 going to be a problem that would require me to send the jury  
12 out?

13 MR. MEADOR: No, Your Honor.

14 THE COURT: Okay. Thanks. We'll see you at 8:30  
15 then. Thank you.

16 (Recess at 8:14 a.m.)

17 THE COURT: Thank you. Where's our witness?

18 MR. MEADOR: She's coming in right now, Your Honor.

19 THE COURT: Okay. Miss Higley, you can just resume on  
20 the witness stand. Thank you. Let's have the jury brought in.

21 (The jury entered the courtroom.)

22 THE COURT: Good morning. Please be seated.

23 Mr. Meador, you may continue your examination.

24 MR. MEADOR: Thank you, Your Honor.

25 NANCY HIGLEY, DEFENDANT'S WITNESS, PREVIOUSLY SWORN

1 CONTINUED DIRECT EXAMINATION

2 BY MR. MEADOR:

3 Q. Good morning, Dr. Higley.

4 A. Good morning.

5 Q. When we broke yesterday, we were talking about the  
6 questionnaire that Dr. Pinney and Dr. Lockey had prepared and  
7 implemented for use at the plant. Do you recall that?

8 A. I recall that, yes.

9 Q. And we showed you some of the responses on the  
10 questionnaires?

11 A. Yes.

12 Q. Now I'd like to show you Exhibit 476. And is 476 a list of  
13 all the chemicals that were identified on the questionnaire?

14 A. Yes.

15 MR. MEADOR: Now, if we could go to 486, please.

16 Q. Now, did you go to a meeting in January 1998?

17 A. Yes, I did.

18 Q. And this was a presentation on the status by Dr. Lockey,  
19 Dr. Pinney, and Dr. McKay.

20 A. That's correct.

21 Q. And just generally what transpired at that meeting?

22 A. I recall that at that meeting the three of them gave us a  
23 status update of where they were in terms of the medical  
24 monitoring program, looking at the PFTs, just in general just  
25 some of the activities that they'd been working on.

1 Q. And did they discuss the results of the questionnaire and  
2 their analysis of that data?

3 A. Yes, they did.

4 MR. MEADOR: And could we turn to that, please?

5 Q. Now, this is January of '98; right? And there's still --  
6 there's 42 chemicals on this list?

7 A. That's correct.

8 Q. And the number 1 chemical identified by the workers was  
9 acetaldehyde?

10 A. Yes, according to this report, yes.

11 Q. And the number 9 is diacetyl?

12 A. That's correct.

13 Q. And at this meeting, did they indicate to you in any way  
14 that they had narrowed their search to three chemicals as the  
15 possible cause of bronchiolitis obliterans at the plant?

16 A. I don't recall that.

17 Q. They still had this list of chemicals?

18 A. Yeah, they had that list of chemicals, yes.

19 Q. Now, at this point in time is it fair to say that the plant  
20 had been upgraded, the ventilation improved, et cetera?

21 A. Yes, it had been.

22 Q. And from your perspective, at that point in time, the  
23 problem at the plant had been fixed?

24 A. Yes, we hadn't any indications that there had been any  
25 additional problems.

1 Q. But at this point in time you hadn't identified the cause.

2 A. No. That's correct. We had not identified the cause.

3 Q. Now, subsequent to this meeting, did Givaudan retain a  
4 Dr. Linz?

5 A. Yes, they had, yes.

6 Q. And he's an occupational medicine doctor?

7 A. That's correct.

8 Q. And what did he do if you could explain to the jury,  
9 please?

10 A. He was originally at University of Cincinnati, but then he  
11 also was a -- he moved on to a medical surveillance group. I  
12 think it was called Tri-Health in the Cincinnati area, and they  
13 were responsible for doing medical surveillance.

14 Q. And did he review all the pulmonary function tests?

15 A. Yes, he did.

16 Q. And did he double-check to ensure that the problem had been  
17 solved at the plant?

18 A. Yes, he did.

19 Q. And did he write a letter to your company on that point?

20 A. Yeah, I believe he wrote it to the environmental health and  
21 safety group.

22 Q. Now, just a couple follow-up questions. We've had lots of  
23 testimony about the meeting you had with FEMA. I just want to  
24 ask you a couple questions because I want to know what you were  
25 thinking when you went to FEMA. What was your plan? And by

1 that I mean if the members of FEMA had come back to you and  
2 said, "We have a problem at our plant," what did you intend to  
3 do with that information?

4 A. Well, the way we typically worked at FEMA because I sat on  
5 several of the science committees, if an issue came up or some  
6 project we wanted to work on, it was -- usually there was a task  
7 force that was put together of scientists and experts that then  
8 would go out and investigate and solve the problem. We'd done  
9 things in the past for like the FDA in terms of some issues that  
10 the FDA wanted us to address.

11 Q. And on those other situations, had the member company  
12 provided the information initially and not their name to see if  
13 there was any other problems shared by any of the members in the  
14 flavor --

15 A. Yes, yes, yeah. We would confidentially give all of our  
16 information through to FEMA who would then collate it and then  
17 compile it.

18 Q. So was it your plan when you got information back that you  
19 were going to identify your company and share information with  
20 other member companies that were having the same type of  
21 problems you were?

22 A. Yeah, we would have shared our information depending on  
23 what it was through the FEMA organization.

24 Q. And did any other member group report any problems?

25 A. No. We were told that no one else had a problem.

1 Q. And so what did you conclude from that?

2 A. We concluded that it must have just been our one single  
3 Tastemaker plant.

4 Q. Now, prior to 1998 I think you mentioned there was another  
5 expert you hired, a Dr. Nikiforov?

6 A. Dr. Andrey Nikiforov, yes.

7 Q. Who was he?

8 A. He was my consultant. He works for and still is -- he's  
9 now the president of a consulting firm called Toxicology  
10 Regulatory Services in Charlottesville.

11 Q. And what were you having him do?

12 A. Well, Andrey and his -- at the time his boss, Jerry  
13 Shoenig, were experts in toxicology and especially with the EPA.  
14 So they were helping us come up with what I'll call a -- it's a  
15 paradigm on how to look at all the data that was available for  
16 the ingredients and look through it to say -- help us prioritize  
17 them. And we were coming up with a way to -- we classified it  
18 as low, medium, and high levels of concern by route of exposure.  
19 Again, the reason we did it was because OSHA just doesn't have  
20 PELs and TLVs for most of our chemicals. And I was trying to  
21 find a way to narrow it down so we could, you know, look through  
22 the data in an organized fashion based on structure activity  
23 relationships.

24 MR. MEADOR: If I could see Exhibit 3579, please.

25 Q. And this is an October 9, 2003, letter, from NIOSH or



1 Department of Health and Human Services?

2 A. Yes, it is.

3 Q. And what did they say to you at that time? This was a  
4 letter sent to you?

5 A. Oh, yes. I was invited to go to the NIOSH workshop in  
6 Morgantown on the butter flavors and popcorn.

7 Q. And in that letter they tell you -- and this is the  
8 government -- they do not plan to use company or product names.  
9 Is that typical in your initial contact with NIOSH or other  
10 agencies?

11 A. Yes, that's -- they keep the company confidentiality as  
12 well.

13 Q. And do you have any understanding as to why they do that?

14 A. Again, you know, unless it's germane to the solution of the  
15 problem, you know, they wouldn't disclose that kind of  
16 information.

17 Q. Now, we talked about that meeting in January of '98 in  
18 which at that point in time you thought the problem was solved  
19 at the plant. Did a couple years later information come up  
20 about a problem at a different facility in Jasper, Missouri?

21 A. That's correct. NIOSH did a review of a popcorn facility  
22 in Jasper.

23 Q. And that was approximately two years later?

24 A. Yes. They published something in 2001, 2002.

25 Q. And what connection, if any, did Givaudan have with the

1 Jasper, Missouri, plant?

2 A. We didn't have any connection with Jasper, Missouri.

3 Q. And whose product was involved at that plant?

4 A. I believe it was Bush, Boake, and Allen.

5 Q. Now, in 1997 you had some changes at Tastemaker?

6 A. Yeah, we were purchased by a Swiss company called Givaudan.

7 Q. And what happened to some of the employees after that  
8 acquisition?

9 A. Most of the time whenever there's a merger, a lot of the  
10 positions are relooked at. Not most of the time. Almost always  
11 the positions are relooked at for duplication, and, you know,  
12 some people lose their jobs and others, you know -- others are  
13 stay -- are -- you know, are asked to stay.

14 Q. They had two of everybody in every job?

15 A. Not everybody, but a fair number of them, there was two of  
16 everything.

17 Q. Including your job?

18 A. Yeah, there was two of me.

19 Q. And they looked at your job.

20 A. Yes.

21 Q. But you stayed on.

22 A. I stayed on, yes.

23 Q. But Mr. Hochstrasser was laid off?

24 A. That's correct.

25 Q. And he wasn't happy with that?

1 A. I don't believe so, no.

2 Q. No. He filed a lawsuit?

3 A. Yes.

4 Q. But anything about that lawsuit have any relationship to  
5 the work you were doing to find the cause of the problem at the  
6 plant?

7 A. Not to my knowledge, no.

8 Q. Now, there's been a lot of suggestion or testimony in this  
9 case about why didn't Tastemaker test the chemicals. Could you  
10 explain to the jury why you didn't test the individual  
11 chemicals?

12 A. There was a couple reasons. One is in a sense the sheer  
13 number of chemicals and without knowing if it was an individual  
14 chemical or multiple chemicals used together, so even getting at  
15 what to test would be very -- would be very difficult if not in  
16 a sense impossible.

17 The second is there's not good animal models out there  
18 to be able to do the appropriate tests that you might be looking  
19 for. And so this is something that, you know, Lockey and I did  
20 discuss in terms of, you know, how would we approach it. And we  
21 just did not -- you know, we didn't feel that testing was  
22 something that we could have accomplished.

23 Q. Could you explain why there are not good animal models out  
24 there?

25 A. Well, a lot of the animals like, for example, a rat, they

1 don't breathe through their mouth. They only breathe through  
2 their nose. That's one thing. And sometimes their morphology  
3 and the way they handle things are not the same. So, for  
4 example, a rat breathing through their nose, most of the effect  
5 would be in the nasal area rather than necessarily getting down  
6 to the lungs.

7           So there are not good -- there are not good animal  
8 models to be able to extrapolate to the human for all, you know,  
9 end points of toxicology. Some end points there are appropriate  
10 models, and some they aren't.

11 Q. Now, the jury has seen some of your deposition testimony in  
12 which Mr. McClain suggested that you were hiding information on  
13 butter flavoring or diacetyl. How do you respond to that?

14 A. I never hide any information, and I never hid anything from  
15 any of my customers. If they called me up or they sent us  
16 letters, we would respond to them and give them the amount of  
17 diacetyl in the compounds, in the flavors.

18           MR. MEADOR: Thank you. I have no more questions.

19           THE COURT: Mr. McClain?

20           MR. MCCLAIN: Yes.

21                           CROSS-EXAMINATION

22 BY MR. MCCLAIN:

23 Q. Good morning, Dr. Higley.

24 A. Good morning.

25 Q. Did you tell the jury that they solved the problem at

1 Givaudan?

2 A. I believe what I said was we did not find the problem but  
3 there were no additional cases.

4 Q. There was an additional case just last year of diagnosed  
5 bronchiolitis obliterans out of the Givaudan plant, wasn't  
6 there?

7 A. I was not employed there last year.

8 Q. So you really don't know.

9 A. I would not know what happened last year, no.

10 Q. Well, let's back up and talk for a few minutes about some  
11 things. Let's talk about some of the people that were involved  
12 that we've heard from. Now, you talked to Mr. Meador about  
13 Dr. McKay, and you indicate that you didn't know that he was  
14 offering to further assist you doing more tasks; is that right?

15 A. That's correct.

16 Q. And you say that he didn't indicate that to anyone on the  
17 team and that he was somewhat limited in his role; is that  
18 right?

19 A. His -- yeah. His role was limited to doing pulmonary  
20 function tests, yes.

21 Q. He was limited in other ways too, wasn't he?

22 A. Not to my knowledge.

23 Q. Like he was limited because he wasn't allowed to put things  
24 in writing; isn't that true?

25 A. That I don't have any idea of.

1 Q. Well, don't you know that that's what he has said?

2 A. No, I don't.

3 Q. Okay. Let's look at that.

4 (Videotaped deposition excerpt was played in open  
5 court.)

6 MR. MEADOR: Your Honor, I'm going to object to  
7 playing of testimony randomly, relevancy and foundation.

8 THE COURT: Overruled.

9 MR. MCCLAIN: Scott, start that again because we got  
10 interrupted, please.

11 (Videotaped deposition excerpt was played in open  
12 court.)

13 BY MR. MCCLAIN:

14 Q. Now, your team was in control of Dr. McKay; isn't that  
15 right? That was your team as you've called it.

16 A. We were -- he was part of the team, so I can't say that we  
17 were in control of him. He had one function to contribute to  
18 the team.

19 Q. Well, why did you tell him, "Don't put things in writing.  
20 Tell us about it, but don't put in writing"?

21 A. We never told him -- I never told him not to put anything  
22 in writing.

23 Q. Is he telling the truth, or is he lying?

24 A. I can't answer that. From my perspective, he was never  
25 told in front of me to not put anything in writing. In fact,

1 all the PFTs were in writing.

2 Q. And he was told, "Don't use certain language when  
3 describing certain respiratory effects," wasn't he?

4 A. Not in my -- not in my presence he wasn't told that.

5 MR. MCCLAIN: Scott, go ahead and play his testimony.

6 (Videotaped deposition excerpt was played in open  
7 court.)

8 A. Again, that was nothing that happened in my presence. I  
9 have no knowledge of him being told that.

10 Q. Specifically he was told, "Don't use the words  
11 bronchiolitis obliterans"; isn't that right?

12 A. No, that's not right to my knowledge.

13 Q. Okay.

14 MR. MCCLAIN: Scott?

15 (Videotaped deposition excerpt was played in open  
16 court.)

17 Q. So weren't -- wasn't Glenn Ingraham and Janice Dees part of  
18 your team?

19 A. They worked for John Hochstrasser. I mean, they were in a  
20 sense a sub team, but the main team was John, Karen Duros,  
21 myself, Lockey, and then Janice and Glenn would come to the  
22 meetings when we needed them to.

23 Q. So were Ingraham and Dees rogue employees?

24 A. I wouldn't say that, no.

25 Q. Is Dr. McKay telling the truth?

1 A. If that's how he recalled it, but nobody ever said that to  
2 him in front of me.

3 Q. So this idea you've presented of this wide-open,  
4 wide-ranging investigation just is not true.

5 A. I don't agree with that at all.

6 Q. Well, you didn't even know that he was told not to even say  
7 bronchiolitis obliterans to the employees.

8 A. My contact was John Lockey, and we had free exchange with  
9 Dr. Lockey.

10 Q. Now, let's talk about Dr. Lockey since you mentioned him,  
11 and it's not John Lockey. It's Jim Lockey; right?

12 A. Excuse me.

13 Q. Dr. Lockey you claim -- yesterday at some point in time the  
14 question was did you realize that you were going to find what  
15 the cause -- that you weren't going to find what the cause of  
16 the disease was at the plant, and you said, "Yeah, Dr. Lockey  
17 and I did talk about that. You know, we weren't able to find,  
18 you know, a cause. So again, the holistic approach of a total  
19 medical surveillance type of program was -- you know, was the  
20 way to go." That was your testimony yesterday. Do you remember  
21 that?

22 A. Yes.

23 Q. Okay. Do you know that Dr. Lockey has already testified in  
24 this court that he has regretted the fact that you didn't allow  
25 him to complete his investigation and that he could have



1 prevented the entire outbreak at Jasper, Missouri, if you hadn't  
2 prevented that?

3 A. No, I don't. I'm not aware of that at all.

4 MR. MCCLAIN: Scott?

5 (Videotaped deposition excerpt was played in open  
6 court.)

7 Q. You prevented Dr. Lockey from doing a complete  
8 investigation and finding out which chemicals were involved;  
9 isn't that true?

10 A. Absolutely not true.

11 Q. Is he telling the truth or not?

12 A. That might be how he sees it, but he and I had meetings  
13 together, and he was fine with the approach that I was taking  
14 with regard to looking at the chemicals.

15 Q. And Dr. Brooks was fired, wasn't he?

16 A. Not to my knowledge at all, no.

17 MR. MCCLAIN: Scott.

18 (Videotaped deposition excerpt was played in open  
19 court.)

20 Q. Yeah. And the woman there was you, and the fellow that was  
21 advising you on the issues was the person you just mentioned to  
22 Mr. Meador; right?

23 A. The woman absolutely was not me that he's describing.

24 Q. So is he telling the truth or he's not telling the truth?

25 A. It wasn't me.

1 Q. So he's not telling the truth?

2 A. I can't -- if that's how he recalls it, I -- no one ever  
3 indicated to me nor is it my understanding that he was fired.

4 Q. And finally, John Hallagan, the president of your own trade  
5 organization, believes you misled him; isn't that right? Don't  
6 you know that?

7 A. No. John Hallagan is not president of FEMA.

8 Q. Well, wait. Just stop for a minute.

9 A. No, I do not know that.

10 Q. Well, let's see what Mr. Hallagan had to say here in court.

11 (Videotaped deposition excerpt was played in open  
12 court.)

13 A. And perhaps that's John's recollection, but Dr. Lockey went  
14 with us. We went twice, and full information was provided at  
15 that meeting.

16 Q. Yeah. You didn't tell him that you had eight cases of  
17 bronchiolitis obliterans, did you?

18 A. No. Dr. Lockey gave him a full report at that meeting.

19 Q. Well, why does Mr. Hallagan feel like you misled him?

20 A. I have no idea.

21 Q. Why does everyone disagree with your rendition of the  
22 facts?

23 A. I have no idea.

24 Q. Let's look at some other issues in the case, Ms. Higley.

25 First of all, I was kind of curious -- yesterday you introduced

1 yourself as a toxicologist, but when I deposed you, you said,  
2 "I'm not a toxicologist." So which is it? Are you a  
3 toxicologist, or aren't you?

4 A. I have toxicology training. I have training in  
5 biochemistry and biology. I have a breadth of training in  
6 various scientific fields.

7 Q. So okay. When I deposed you, you weren't a toxicologist.  
8 Yesterday in court you are a toxicologist. Which is it? Are  
9 you or aren't you?

10 A. I am not a board-certified toxicologist, no.

11 Q. So when you told the jury you're a toxicologist, that  
12 really is not true.

13 A. It is true. I do -- I have training in toxicology. I'm  
14 not a board-certified toxicologist. Some people choose to go  
15 that route which is a more specialized field.

16 Q. And you've never gone that route.

17 A. No, I have not. My job does not require it.

18 Q. And what I can gather anyway from your time in Cincinnati  
19 was is that you were extremely busy; am I right?

20 A. Yes.

21 Q. You didn't get out much.

22 A. I'm not sure what you mean.

23 Q. Well, you didn't even know that NIOSH had a major research  
24 facility in your town. Isn't that true?

25 A. That's true.

1 Q. You didn't know that.

2 A. I knew about Morgantown but not Cincinnati.

3 Q. Yeah. Well, we did a MapQuest here from your offices to  
4 the NIOSH offices in Cincinnati that we've all heard about that  
5 actually did the investigations of health effects in plants, and  
6 it took 10 minutes to get from your office, 6.71 miles, from  
7 your office to NIOSH's office, and you didn't even know it was  
8 there.

9 A. No. The people we would have been involved with would have  
10 been in Morgantown.

11 Q. Quite an investigation you did. Quite a diligent search  
12 you did, that ten minutes across town NIOSH was present, the  
13 same group that investigated Jasper and within 17 months found  
14 out the cause of disease there, the same group that investigated  
15 the International Bakers study, and you didn't even know they  
16 existed.

17 A. I knew --

18 Q. Right?

19 A. I know NIOSH existed.

20 Q. But you didn't know that their health investigation unit  
21 existed in your town ten minutes away. Isn't that what you're  
22 telling us?

23 A. That's correct.

24 Q. How can that be possible?

25 A. I wasn't looking into NIOSH being our approach.

1 Q. Because when NIOSH comes in, they tell the world what they  
2 find, don't they?

3 A. They write interim reports, yes.

4 Q. And you didn't want NIOSH in your plant because you didn't  
5 want word to come out.

6 A. That's not correct.

7 Q. Just like Dr. McKay wasn't allowed to say the words  
8 "bronchiolitis obliterans."

9 A. That's not correct.

10 Q. Just like Dr. Lockey wasn't allowed to do a full  
11 investigation.

12 A. That's not correct.

13 Q. Just like Dr. Brooks was fired. It's all the same conduct,  
14 isn't it?

15 A. That's not correct.

16 Q. Well, after -- what is it? After 17 years after this whole  
17 thing began, you still claim that you don't know what the cause  
18 was; isn't that right?

19 A. That's correct.

20 Q. And yet NIOSH was able to discover it in 17 months.

21 A. That's not correct. NIOSH still will not say they know the  
22 causative agent.

23 Q. Well, we'll look at that in just a second. By 2002 it was  
24 pretty clear, wasn't it, that NIOSH had clearly pointed the  
25 finger at diacetyl at the Jasper plant?

1 A. That's not the correct interpretation.

2 Q. Okay. Well, we've seen some documents like this report  
3 from Dr. Kreiss, the conclusions, Clinical Bronchiolitis  
4 Obliterans in Workers At a Microwave Popcorn Company.  
5 Conclusions, the excess rates of lung disease and lung function  
6 abnormalities and the relation between exposures and outcomes in  
7 this working population indicate that they probably had  
8 occupational bronchiolitis obliterans caused by the inhalation  
9 of volatile butter-flavoring ingredients. Isn't that what they  
10 included (sic)?

11 A. They concluded probably, yes.

12 Q. Probably. Probably had bronchiolitis obliterans caused by  
13 the inhalation of volatile butter-flavoring ingredients.

14 A. That's what's in the conclusion, yes.

15 Q. And just so that the jury understands your state of mind,  
16 that doesn't mean you gotta tell anybody about it; right?

17 A. Well, that's not the -- that's not what that says.

18 Q. No, I know that's not what it says. But that's what you  
19 say.

20 A. No, it's not what I say.

21 Q. Is it true?

22 A. No.

23 Q. Well, let's test that. In 2004 you wrote up a series of  
24 control opportunities based on this report; isn't that right,  
25 Miss Higley?

1 A. I wrote up?

2 Q. Yes, you did.

3 A. I'm sorry. You'd have to --

4 Q. It's Exhibit 86 I believe in evidence. That's your  
5 document, isn't it?

6 A. Can somebody focus it for me, please?

7 Q. I can give you a copy of it if you'd like. Would you like  
8 a hard copy?

9 A. I'm fine. Thank you.

10 Q. You're fine with this?

11 A. Yeah, I'm fine. Thank you.

12 Q. This is your document; right?

13 A. I don't see my signature on it. Can I see the end of it?

14 Q. H-i-g-l-e-y.

15 A. Yeah, I don't know if I -- that looks like I was copied it.  
16 I don't sign my documents this way.

17 MR. MCCLAIN: Would you go to the next page, Scott?

18 Is there a next page to it?

19 Q. So, Dr. Higley, you at least received a copy of this  
20 document? Is that your testimony?

21 A. Yes.

22 Q. It says, "Introduction from Tastemaker, worker protection  
23 solutions for flavors for microwave popcorn. Introduction, data  
24 suggests an increased prevalence of respiratory and dermal  
25 symptoms in workers in the microwave popcorn areas, specifically

1 the mixing rooms." Did I read that right?

2 A. That's correct. You read it right.

3 Q. Okay. The respiratory symptoms of the case studies in the  
4 microwave popcorn plant indicate an effect on the small airways,  
5 the bronchioles. This suggests that the causative agents in --  
6 quote, unquote, are transported deep into the lungs. The case  
7 studies demonstrate that heated soybean oil, salt, and flavoring  
8 poured from open buckets in the mixing tanks can carry the  
9 causative agents deep into the lungs. Did I read that right?

10 A. Yes.

11 Q. Okay. And there's a series of suggested flavor control  
12 opportunities here. Minimize fugitive volatile organic  
13 emissions, respirable dusts, and other lung irritants through  
14 use of closed process to transfer volatile flavoring  
15 ingredients, irritating flavoring ingredients, and/or irritating  
16 dusts; consideration of soluble bags as a delivery vehicle;  
17 substitution of flavor organics with less volatile flavoring  
18 substances; minimize temperatures needed to dispense the  
19 flavors; use negative pressure to control the volatility.

20 Those were all suggestions that you recognized needed  
21 to be employed within Givaudan; isn't that right?

22 A. Yeah, that's what's in this document, yes.

23 Q. Okay. And that would be consistent with what the studies  
24 found; right?

25 A. That was the recommendations in the studies, yes.



1 Q. Now, you were in charge of MSDS sheets; isn't that right?

2 A. That's correct.

3 Q. Going all the way back to '92.

4 A. Correct.

5 Q. So it's true then I guess that in 2004 you incorporated  
6 these results in your MSDS sheets.

7 A. That wouldn't be appropriate place to do that in my  
8 opinion.

9 Q. That's what goes to the customer; isn't that right?

10 A. But what goes to the customer are the hazards. How you  
11 handle it has to be taken care of at the plant given their --  
12 how they look at their own exposure to the material.

13 Q. So it's your --

14 A. I can't tell a plant how to put in their controls.

15 Q. Well, that's what an MSDS sheet does, doesn't it?

16 A. No, it does not.

17 Q. Okay.

18 A. Its purpose is to portray the hazards of the material.

19 Q. Okay. Well, let's look how you portrayed the hazards of  
20 the material in 2004 after you wrote this internal memo. This  
21 is a 2004 Givaudan material safety data sheet, natural butter  
22 flavor, WONF.

23 MR. MCCLAIN: Would you go, Scott, to the next?

24 Material, conditions to avoid, none known. Go to the health  
25 effects status, Scott.

1 Q. Hazards. You said this is what the document is intended to  
2 show. Inhalation, none known.

3 A. For that particular butter flavor, that's what would have  
4 probably shown up in terms of looking at the hazards of each of  
5 the ingredients.

6 MR. MEADOR: What is the exhibit number of that,  
7 please?

8 MR. MCCLAIN: 1022.

9 MR. MEADOR: Thank you.

10 MR. MCCLAIN: 1022.

11 BY MR. MCCLAIN:

12 Q. Are you suggesting that following the publication of the  
13 NIOSH paper that it was appropriate to pass on to your customer  
14 that there were no known health hazards with butter flavor?

15 A. Because there wasn't anything in the publications that  
16 directly linked anything to the butter -- our butter flavors,  
17 no.

18 Q. Miss Higley --

19 A. The Jasper plant was not our plant, our butter flavor.

20 Q. Well, that's not true either. You supplied butter flavor  
21 to Jasper.

22 A. I don't believe so.

23 Q. You don't know that you supplied butter flavor to Jasper.

24 A. I don't think we did.

25 Q. And that currently Givaudan is a defendant in lawsuits

1 brought by those workers at Jasper. You don't know that.

2 A. I don't know about it being Jasper, no.

3 Q. The reality is is that you say that there's no skin  
4 irritation from butter flavor? We've heard all about skin  
5 irritation in this case.

6 A. It depends on the formulation. I don't know what the  
7 formulation is for this. If it is an ingredient less than 1  
8 percent, then no, it would not be an irritant.

9 Q. And then finally, in terms of precautions, there are  
10 precautions that are placed on this in terms of personal  
11 protection. You say that that's not the goal of one of these  
12 documents, but, in fact, that's a requirement of an MSDS sheet  
13 to have personal protection; isn't that right?

14 A. Yes.

15 Q. You say in a well-ventilated area, respiratory protection  
16 is not normally required. But you say in confined or poorly  
17 ventilated areas if material is toxic by inhalation, the use of  
18 approved respiratory protection is recommended.

19 A. Correct.

20 Q. But you don't tell anybody that this is a toxic material.

21 A. Because it isn't a toxic material.

22 Q. Well, it isn't?

23 A. No.

24 Q. Well, the reality is that way back in 1985 you were told  
25 that this material was harmful by inhalation, isn't that right,

1 diacetyl?

2 A. That's not true.

3 Q. And you were told that it would cause systemic toxicity;  
4 isn't that right?

5 A. No, it's not true.

6 Q. It's not true. Well, let's look at the 1985 FFIDS. This  
7 is 1985. Flavor or fragrance ingredient data sheet, chemical  
8 name, diacetyl. This is what you looked at with Mr. Meador  
9 yesterday, wasn't it?

10 A. That's correct.

11 Q. Okay. Let's look at the health effects data. Known  
12 effects of acute exposure, inhalation, harmful. You just told  
13 the jury it didn't say that. That was wrong. Can you answer my  
14 question?

15 A. Yes, I can.

16 Q. You were wrong.

17 A. No. It says that, but --

18 Q. Okay.

19 A. -- you're missing the piece that we talked about yesterday.

20 Q. No, my question didn't ask anything about a piece. It  
21 asked does it say that, and you said it doesn't. You were wrong  
22 about that as we've seen you've been wrong so far about a lot of  
23 things?

24 A. It says it on the FFIDS sheet.

25 Q. And it also says it's capable of producing systemic

1 toxicity; isn't that right?

2 A. That's correct.

3 Q. All right. You told the jury it doesn't say that.

4 A. The FFIDS sheet does say that.

5 Q. See, Miss Higley, I'm not sure you ever read this stuff.

6 Did you ever really read it?

7 A. Yes, sir, I did.

8 Q. Then how come you didn't know it said it?

9 A. I know it said it.

10 Q. Well, then why did you answer the question that I just

11 posed to you that it didn't say it?

12 A. Because I was looking for totality of the evidence, and the

13 totality of the evidence is in the last part of the FFIDS sheet

14 where all the evidence is looked at and the --

15 Q. What in the world does that mean?

16 A. What it means is -- and as I explained yesterday, what it

17 means is you look at the studies, and experts have looked at the

18 studies, and they determine if they're peer reviewed, if they're

19 robust, if they meet the criteria for good tox study, and then

20 they make a conclusion which is what the FFIDS sheet did.

21 Q. I didn't ask you a single thing about any of that. I asked

22 you a real simple question. I asked doesn't it say that it's

23 harmful by inhalation, and you said no.

24 A. In that section it does say that, yes.

25 Q. Yeah. So that was an incorrect answer.

1 A. I apologize.

2 Q. Okay. And likewise, I said it says it's capable of  
3 producing systemic toxicity. And you said no, it doesn't say  
4 that either.

5 A. There is a study that's listed there that says that.

6 Q. Now, let's talk about this idea that, well, you know, an  
7 MSDS sheet doesn't really -- your competitor, IFF, in 2004 in  
8 response to the NIOSH studies put all the information down,  
9 didn't they, that you refused to pass along to your customers in  
10 regard to their butter flavors?

11 A. I never refused to pass anything along. I left Givaudan in  
12 2004.

13 Q. Yeah. You knew that IFF was passing that information along  
14 to their customers; isn't that right?

15 A. For their butter flavors?

16 Q. Yes.

17 A. I've seen that, yes.

18 Q. Yes. All right. Let's look at that together again.

19 MR. MCCLAIN: This is a new exhibit, Your Honor, not  
20 on our exhibit list. It's on our exhibit list, but it's not  
21 been admitted yet. It's 717.

22 Q. Hazard identification. Theirs is a little different than  
23 yours.

24 MR. MEADOR: I'm going to object. Outside the scope  
25 and foundation.

1 THE COURT: Well, do you have --

2 BY MR. MCCLAIN:

3 Q. You've seen this material safety data sheet, haven't you,  
4 Miss Higley? You don't need to look at him. Look at me.

5 A. I'm sorry. I thought I heard an objection, so I don't know  
6 if I'm allowed to answer.

7 THE COURT: Yeah. Right. That's good of you. So  
8 hang on for one second while I ask the lawyers a question. What  
9 category was this exhibit in?

10 MR. MCCLAIN: It was on the "may use" list. I don't  
11 know what category it was in, but there was no authentication  
12 problem. We pulled it back because we didn't know that this  
13 issue was going to come up until yesterday, but it's an IFF --  
14 another butter flavor company's material safety data sheet.  
15 Goes to state of the art.

16 THE COURT: What's your objection?

17 MR. MEADOR: This is 2004, way outside the scope of  
18 direct and the issues in this case too.

19 THE COURT: Overruled. It's admitted into evidence.

20 \* \* \* \*

21 (Exhibit 717 was admitted.)

22 \* \* \* \*

23 BY MR. MCCLAIN:

24 Q. Look at what they provided, Miss Higley. Chronic exposure,  
25 excessive chronic inhalation may cause lung damage, very direct,

1 telling people exactly what they knew at a point in time that  
2 Givaudan was still saying we don't know any health effects by  
3 inhalation. Isn't that true, ma'am?

4 A. I don't believe --

5 Q. Let's break it down.

6 A. Yeah.

7 Q. At the same time that they're telling people that excessive  
8 chronic inhalation may cause lung damage, you were telling  
9 people there were no health effects by inhalation; isn't that  
10 right?

11 A. Again, if this is 2004, I wasn't there then. I can't  
12 answer that.

13 Q. I showed you the MSDS sheet, didn't I?

14 A. Was that from 2004?

15 Q. It was dated 2003.

16 A. I'm sorry. I'm confused. You're asking me to compare 2003  
17 with 2004.

18 Q. Sure. Did Givaudan ever, ever put out a material safety  
19 data sheet which says excessive chronic inhalation may cause  
20 lung damage?

21 A. Again, I don't know what they did after 2004.

22 Q. Not while you were there.

23 A. Correct.

24 Q. You never allowed that to come out.

25 A. I never -- I didn't have any evidence to have put that on



1 there.

2 Q. Well, somehow IFF had it.

3 A. Apparently in 2004 they made a decision on that particular  
4 flavor to be able to need to put that statement on.

5 Q. And likewise, they put quite a bit more information about  
6 personal protective equipment than you put.

7 A. Again, they must have had information at that time for that  
8 particular flavor to do that.

9 Q. They say skin protection, avoid contact with skin. You  
10 said no known effects from skin exposure; isn't that right?

11 A. For that particular formula, that's what it said, yes.

12 Q. It says eye protection, use tight-fitting goggles or  
13 full-facepiece respirator when eye contact might occur.  
14 Exposure monitoring, use a certified air sampling expert to  
15 identify volatile chemicals that are present in significant  
16 amounts in the air and to measure on a regular basis the air  
17 concentration of one or more of these chemicals as indicative of  
18 exposure and to ensure the continuing effectiveness of  
19 engineering controls.

20 A. Again, that was their assessment for that particular  
21 flavor. They had some data.

22 Q. You didn't pass along that information on any of your  
23 flavors, did you?

24 A. I don't have data on their flavor to be able to pass on.

25 Q. Is the answer yes or no?

1 A. No.

2 Q. You didn't do it.

3 A. Didn't have any data to support doing that.

4 Q. You didn't do it.

5 A. Correct.

6 Q. NIOSH alert, they refer the jury -- they refer their users  
7 to the NIOSH alert in December 2003, the National Institute of  
8 Occupational Safety and Health, NIOSH, published an alert on  
9 preventing lung disease in workers who use or make flavorings.  
10 NIOSH publication, they give the number. You are strongly urged  
11 to review this NIOSH alert to obtain a thorough understanding of  
12 the methods recommended by NIOSH to reduce the risks of worker  
13 exposures to flavorings. That's the advice they gave their  
14 customers, and you compete for customers; isn't that true?

15 A. That's true we compete for customers.

16 Q. You never passed that information along to workers, did  
17 you?

18 A. They had it in 2004. To my knowledge, no.

19 Q. Now, you say that that was 2004, but your failure to  
20 include them goes way back beyond 2004. In 1992 you had  
21 established a series of controls for safe work around diacetyl  
22 in your own plant; isn't that right?

23 A. Yes.

24 MR. MCCLAIN: Scott, would you bring this up? This is  
25 Exhibit -- which is the number? 100? In evidence, Your Honor.

1 Q. It says the procedures were review the MSDS. Now, that's  
2 good advice, isn't it, because the MSDS should tell you the  
3 personal protective equipment you ought to use and all the  
4 hazards. That's what it's for.

5 A. That's correct.

6 Q. Right?

7 A. Correct.

8 Q. And so you tell your own employees review the MSDS because  
9 you want them to know what the hazards are; right?

10 A. Yes.

11 Q. And how to protect themselves; right?

12 A. Right.

13 Q. And it says whenever liquid diacetyl or a product where  
14 liquid diacetyl is present is to be used, a respirator with  
15 chemical-resistant gloves must be worn; right? That's what you  
16 advised your own employees?

17 A. That's what was written on this document, yes.

18 Q. But you never passed that information along to persons  
19 working with butter flavors, did you?

20 A. Because this was in reference to the use of diacetyl. The  
21 workers were exposed to diacetyl in its pure form.

22 Q. Oh. Is that why it was given?

23 A. To my knowledge, yes.

24 Q. Once again, you're not reading.

25 MR. MCCLAIN: Go to the paragraph, Scott. Would you

1 bring that up again? Bring the paragraph up wherever liquid  
2 diacetyl so we can see it larger, please. That's not large.

3 Q. Wherever liquid diacetyl or a product where liquid --  
4 wherever liquid diacetyl or a product where liquid diacetyl is  
5 present is to be used, even if the material was in a product,  
6 your recommendation was to use these precautions; isn't that  
7 right?

8 A. It was to be used for a hundred percent diacetyl.

9 Q. Or where a product -- or a product where liquid diacetyl is  
10 present is to be used.

11 A. Where it's present to be added to be used to be made is  
12 what my interpretation of that document has always been.

13 Q. The reality was your workers at the Givaudan plant were  
14 supposed to wear respirators even when working around butter  
15 flavors; isn't that right?

16 A. When they used diacetyl, they were supposed to be wearing a  
17 respirator.

18 Q. Oh. But once it went into the butter flavor, they didn't  
19 have to wear it. Is that your testimony?

20 A. I would say no depending on its concentration.

21 Q. It says any room containing diacetyl in a liquid state must  
22 be labeled respirator required. Isn't that right?

23 A. That's what it says, yes.

24 Q. And it says wherever material in any tank -- wherever  
25 material is in any tank, lids must be closed. If ventilation,

1 paren, mechanical, is not connected to a tank or is unavailable,  
2 a respirator must be worn at all times while in the room. Isn't  
3 that right?

4 A. That's correct.

5 Q. Any room containing a powder that contains or is formed  
6 from liquid diacetyl must be labeled chemical goggles required  
7 before entering.

8 A. That's correct.

9 Q. That's not pure diacetyl. That's a spray dried product  
10 containing diacetyl; isn't that true?

11 A. That's true.

12 Q. So your statement that this only applies to pure diacetyl  
13 just isn't true either, is it?

14 A. No, I believe the liquid one is true. The goggles for the  
15 second one is for powders and the volatiles from the spray  
16 drying.

17 Q. And the reality is, the reality is, is that once diacetyl  
18 volatilizes whether it's in pure form or in a butter flavor, the  
19 same chemical hangs suspended in the air; isn't that true?

20 A. I'm not sure in terms how suspended in the air it is. Its  
21 volatility is -- it's heavier than air, so it would not  
22 necessarily be suspended in the air.

23 Q. Isn't it true that diacetyl volatilizes at 85 degrees  
24 centigrade?

25 A. Eighty-eight, something around there, yes.

1 Q. So if it's in a butter flavor and you heat it to 85  
2 degrees, the diacetyl comes out?

3 A. Correct.

4 Q. Just like if you have a container of pure diacetyl; isn't  
5 that true?

6 A. It depends on the concentration, yes.

7 Q. The only question is how much is in the air?

8 A. Correct.

9 Q. And, of course, your diacetyl suppliers told you to use  
10 air-purifying respirators when using this stuff; isn't that  
11 right?

12 A. I don't -- I don't recall that from the MSDSs.

13 Q. Okay. Well, let's look at those because I want to be fair  
14 to you. Look at the Citrus & Allied.

15 MR. MCCLAIN: That's 2005 -- or 2025 I think, Scott,  
16 isn't it? Yeah, CA Aeromatics.

17 Q. You recognize this, don't you?

18 A. Yes.

19 Q. Okay. That's one of your suppliers of diacetyl; right?

20 A. That's correct.

21 Q. Okay. Go over to respiratory protection. Air-purifying  
22 respirator. That's what they recommend; right?

23 A. At that time. I don't know what the date on this one is.

24 MR. MCCLAIN: Well, go to it, Scott. I think it's '92  
25 or '93. '88. Even before.

1 Q. You were told use an air-purifying respirator when using  
2 this stuff; right?

3 A. That's what the MSDS says, yes.

4 Q. And Berje who we heard about in opening as being one of  
5 your suppliers -- they were, weren't they?

6 A. I believe so, yes.

7 Q. Okay. Berje recommended --

8 MR. MCCLAIN: Would you bring that up, Scott? That's  
9 2172 I think.

10 Q. Berje in 1991 was recommending --

11 MR. MCCLAIN: Would you go down?

12 Q. -- respiratory protection, use positive pressure,  
13 self-containing breathing apparatus.

14 A. Okay.

15 Q. That's scuba gear; right?

16 A. I assume so, yes.

17 Q. So you were being told when working around this stuff,  
18 diacetyl that can get into the air and vaporize, wear scuba  
19 gear; right?

20 A. It says self-contained breathing apparatus.

21 Q. And through 2003 what you were telling your customers when  
22 you're working around something that might release diacetyl into  
23 the air, don't take any precautions at all.

24 A. I don't believe we say don't take any precautions, no.

25 Q. You tell them that there's no respiratory protection

1 required; isn't that true?

2 A. That would have been what our environmental health and  
3 safety people advised on the MSDS, yes.

4 Q. But it's not what you were being advised, were you?

5 A. Not by these MSDSs, no. But our environmental health and  
6 safety people would have been advised what to put on.

7 Q. And because that advice was given, hundreds, if not  
8 thousands, of microwave popcorn workers are sick today; isn't  
9 that right?

10 A. I'm sorry? Repeat.

11 Q. And we know because that was the advice given, don't take  
12 any precautions, microwave popcorn workers across the country  
13 are sick today; isn't that right?

14 A. That's --

15 MR. MEADOR: Objection. Lacks foundation. Outside  
16 the scope.

17 THE COURT: Overruled.

18 A. I don't agree with that, no.

19 Q. Did you hear Dr. Lockey?

20 A. I heard Dr. Lockey, yes.

21 Q. He could have prevented the whole thing if you had just  
22 allowed him to complete the study. Did you hear him say that?

23 A. I heard him say that, but I don't agree with it.

24 Q. Now, you know, don't you, Miss Higley, that as a supplier  
25 of chemicals you're required to know the hazards of your



1 product? That's what the Hazard Communication Act says; right?

2 A. That's correct.

3 Q. Okay. So you knew from a very early time when this whole  
4 thing was happening in your plant that diacetyl was a suspect  
5 chemical; isn't that right?

6 A. Suspect, marker. It's been called a marker chemical.

7 Q. A marker.

8 MR. MCCLAIN: Let's look at 957, Scott, to see how far  
9 back it was a suspect chemical for you.

10 Q. This is a '93 document. This is review of toxicity  
11 information. This is from John Hochstrasser to you in '93. It  
12 says, "Please send me copies of the literature that you obtained  
13 on diacetyl during the last exposure review. Diacetyl still  
14 appears to be a viable candidate as a possible etiologic agent  
15 or at least one of the agents." Isn't that what  
16 Mr. Hochstrasser wrote to you?

17 A. Yes.

18 Q. And so in terms of knowing the hazards of the chemical, you  
19 suspected diacetyl as being one of those chemicals potentially  
20 as early as '93; isn't that right?

21 A. It was one of the chemicals John asked me to investigate,  
22 yes.

23 MR. MCCLAIN: And if you look at 112, Scott -- go back  
24 to 957 then. Wrong number. I need 114. I'm sorry.

25 Q. This is a note from Hochstrasser later that same year,

1 10-20-93, which he says diacetyl may need a risk assessment but  
2 why not get from suppliers. He says diacetyl should have a tox  
3 study. So you were talking at least in '93 about needing two  
4 things. Needing a tox study and needing a risk assessment.  
5 Were either of those ever done, or did you obtain them from  
6 suppliers or anyone else in 1993 for diacetyl?

7 A. No. We did a literature search, and it determined it  
8 wasn't warranted, needed.

9 Q. Well, you did a literature search and didn't find that  
10 anyone had done a tox study or anyone had done a risk  
11 assessment, and so you concluded that not one needed to be done?

12 A. That's not true. We did a lit search and look -- and  
13 toxicology studies were done, but it didn't point to any reason  
14 to need to do a study for this particular situation.

15 Q. You didn't do one.

16 A. That's correct.

17 Q. And the reality is what was really going on within the  
18 company is you were trying not to find the answer; isn't that  
19 right?

20 A. That's absolutely not true.

21 Q. Okay. Let's look at what you said in your papers. Now,  
22 first of all, just -- these memos were never to be seen by the  
23 public when they were being drafted; isn't that right? That was  
24 your expectation that we would never be looking at this in a  
25 court of law; isn't that right?

1 A. I don't think of that when I write a memo, no.

2 Q. They were internal memos.

3 A. Some memos are. Some aren't.

4 Q. Okay. Let's look at 2039. Liquid flavors department, same  
5 time period, November of 1993, at the same time

6 Mr. Hochstrasser's suggesting you better do a tox study or do a  
7 risk assessment or get one. The hazard communication standard,  
8 there is no provision of the OSHA standard that requires the  
9 immediate dissemination of information regarding a suspect  
10 occupational health hazard. However, if we find there is a  
11 specific hazard present, that information will have to be shared  
12 with the affected and potentially affected employees. Isn't  
13 that what you said internally?

14 A. Somebody wrote that, yes, that's correct.

15 Q. So as long as you didn't find out what was causing it, it  
16 was your view you didn't have to share the suspects with anyone;  
17 isn't that right?

18 A. What it's saying is if there is a specific health hazard,  
19 then we would disclose it.

20 Q. No. That's not what it's saying. It says if we don't find  
21 out what the cause is, we don't have to tell anybody. Isn't  
22 that what it says?

23 A. No, I don't agree with that.

24 Q. Well, the fact is you didn't try to find the specific  
25 health hazard present; isn't that true?

1 A. That's not true.

2 Q. You said that yesterday.

3 A. We did try --

4 Q. That you and Dr. Lockey said it wasn't possible and you  
5 didn't try to find it.

6 A. That we did try to find it and then we determined we  
7 couldn't find it.

8 Q. Well, Dr. Lockey says you stopped him from finding it.

9 A. I don't agree with what he said then because he sat in my  
10 office and we had that discussion together.

11 Q. Now, you mentioned that you did some literature searches  
12 and tried to come up with what other people had found, and you  
13 did find the International Bakers study; isn't that right?

14 A. That's correct.

15 Q. And so even though you didn't know where NIOSH was, you  
16 found their study, right, within a few months of beginning to  
17 look at this issue?

18 A. We found the Bakers study, yes.

19 Q. And you saw from the report that the person involved was a  
20 fellow by the name of Rob McConnell.

21 A. Okay.

22 Q. And he was headquartered in Cincinnati. Did you know that?

23 A. I did not know that.

24 Q. But let's look at the abstract that you pulled up because I  
25 noticed something as I was looking at these documents. It

1 says -- now, this is from Janice Dees. Now, she was the nurse  
2 working with you; is that right?

3 A. Yeah, she worked for John.

4 Q. And she writes a memo to everyone on the team, Mike Davis  
5 who was the CEO; right?

6 A. Yeah, he was the president, yes.

7 Q. Bob Pellegrino who was in charge of U.S. operations or  
8 North American operations?

9 A. Uh-huh.

10 Q. Duros, the lawyer; and Steiger was head of the team; and  
11 Biscopink, I can't remember what he did; but Hochstrasser was  
12 the industrial hygienist; and Higley, we know who you are;  
13 right?

14 A. I hope you do.

15 Q. Now, attached is the article abstract. Attached is an  
16 abstract from an interesting article I found while doing a  
17 literature review. This is the only article I can find that  
18 demonstrates a possible relationship between dust and  
19 bronchiolitis obliterans or emphysema. I will obtain the entire  
20 health hazard evaluation for further review. And you did obtain  
21 that; am I right?

22 A. Yes, we did.

23 Q. But let me -- this is just kind of curious. Janice Dees  
24 found this. You didn't find it; am I right?

25 A. Yeah, because it wasn't keyworded under bronchiolitis

1 obliterans in the literature searches I did.

2 Q. Well, she found it somehow. How did the nurse find it when  
3 the toxicologist couldn't?

4 A. I don't know.

5 Q. Let's go to the second page. It says, "Health hazard  
6 evaluation report, International Bakers Services, South Bend,  
7 Indiana." Here is the abstract. But this was a curious thing  
8 that I found. They recommended that when -- at times the dust  
9 levels measured 20 milligrams per cubic meter. When material  
10 was added to the mixers, employees wore a supplied air  
11 respirator, the very kind that you were recommended to wear by  
12 Berje and by Citrus & Allied; right?

13 A. This is the standard for dust that they're quoting here.

14 Q. Okay. But they wore supplied air respirators; right?

15 A. For dust, yes.

16 Q. Okay. When the workers were mixing up these flavoring  
17 mixtures; right?

18 A. Again, because of the dust.

19 Q. Some of which contained diacetyl.

20 A. May or may not have.

21 Q. Workers did not always use the respirators during clean-up  
22 operations. Did you see that?

23 A. Yeah, I saw that.

24 Q. You saw that at the time.

25 A. Saw that when I reviewed the article, yes.

1 Q. And so you knew when you received this that out in the  
2 field workers working would wear respirators when mixing things,  
3 mixing mixtures, but they would not wear respirators during  
4 clean-up operations. That's something you knew.

5 A. That's what NIOSH found, yes.

6 Q. Yes. And that makes sense to you, doesn't it, based on  
7 your observations? Workers will take the respirators off if  
8 they perceive that there's no hazard currently.

9 A. I don't have any knowledge of that. I don't -- that's not  
10 my job to look at environment health and safety.

11 Q. Makes sense from a perspective as a toxicologist?

12 A. No, that's not a toxicology question.

13 Q. You've worn respirators before, haven't you?

14 A. No, I don't wear respirators.

15 Q. You've never wore one?

16 A. No. At home I do when I'm doing woodworking but . . .

17 Q. They're uncomfortable, aren't they?

18 A. They can be, yes.

19 Q. On a hot day you like to get them off just as soon as you  
20 can; right?

21 A. I can't comment on that one. Sorry.

22 Q. You've never worn one on a hot day.

23 A. No.

24 Q. They're not very comfortable, are they?

25 A. I've never worn one.

1 Q. I thought you just said you --

2 A. Only when doing woodworking I do at home but not --

3 Q. They're not comfortable, are they?

4 A. I've not done one in a plant situation, no.

5 Q. Are they comfortable or not?

6 A. They can be uncomfortable, yes.

7 Q. All right. Now, once you got ahold of the study, the

8 Bakers study, you went out among your employees and took this

9 list of things that they were sensitized to or that they felt

10 were irritants; right? Right?

11 A. There was a list, yes.

12 Q. Yeah. And then you took the chemicals from the Bakers list

13 that the workers there were exposed to; right?

14 A. Correct. There's a list.

15 Q. And then you took the results of your tox studies, right,

16 and you compared all the chemicals to try to find out which one

17 showed up on all three lists? Do you remember this or not?

18 A. There -- yes, there was a list. It wasn't from the tox

19 studies, though. There's a list from John's E, H, and S list.

20 There's the Bakers list. And there's the list from the

21 employees.

22 Q. Right. This is Exhibit 166. And the three chemicals that

23 were on all three lists were acetaldehyde, benzaldehyde, and --

24 no surprise -- diacetyl; right?

25 A. Okay.



1 Q. And so it wasn't a matter of running tests on hundreds of  
2 chemicals. By this time it was completely conceivable that you  
3 could have run a test on as little as three chemicals; right?

4 A. No, I don't agree with that.

5 Q. You didn't run any tests on acetaldehyde, did you?

6 A. No, because there's a huge literature, body of literature,  
7 on it.

8 Q. And we're going to get to that in just a second. And  
9 benzaldehyde, you didn't run any tests on it either, did you?

10 A. No, no.

11 Q. It's a related chemical to acetaldehyde, though.

12 A. It's related.

13 Q. It's related. So once you know about one, you probably  
14 know about the other; okay? So we're really talking about two  
15 real chemicals here, diacetyl and the acetaldehydes; right?

16 A. Of the three that you highlighted, yes.

17 Q. Okay. So it's really two chemicals that you had to  
18 investigate: Benzaldehyde and acetaldehyde.

19 A. I don't agree with that, though. I agree that you have to  
20 look at all the chemicals.

21 Q. I misstated it. Diacetyl and the acetaldehydes, those two  
22 is what we're talking about; right?

23 A. Of the ones that are on all three lists, yes.

24 Q. Right. Okay. Now, one of the reasons why you disagree  
25 with it is because you concluded that acetaldehyde would not

1 cause bronchiolitis obliterans; isn't that right?

2 A. Yeah, there was no evidence to show that until later on  
3 when one of the workers had an exposure to it.

4 Q. Oh. But you filed an affidavit in court that said there  
5 was no evidence to support the idea that acetaldehyde would  
6 cause bronchiolitis obliterans, didn't you?

7 A. At the time, yeah. I didn't know that from the literature  
8 review.

9 Q. Well, at the time. 1998 is when you filed this; right?

10 MR. MCCLAIN: Affidavit of Nancy Higley. Go to the  
11 back page.

12 Q. It's 1998 you filed this.

13 A. Okay.

14 Q. I understand that Walter Vaske -- that's one of the people  
15 we heard about. Now, he was trying to get workers' comp.  
16 benefits, and your company even opposed those for these people;  
17 isn't that right?

18 A. I'm not involved with that part of the business.

19 Q. Well, you were involved somehow. You got an affidavit to  
20 be supplied to the workers' comp. board; isn't that right?

21 A. I did write an affidavit, yes, for the --

22 Q. Opposing the workers' comp. benefits.

23 A. I don't know what they used it for, no.

24 Q. I understand that Walter Vaske may attribute his  
25 bronchiolitis obliterans condition to exposure to acetaldehyde.

1 When I became aware of this issue, I conducted a comprehensive  
2 review of scientific literature on the subject of any  
3 relationship between bronchiolitis obliterans and acetaldehyde  
4 and didn't find any reported association. That's what you told  
5 the court.

6 A. And that's correct. At the time when I became known of it,  
7 I did a literature search, and there was no connection.

8 Q. So when you told the jury yesterday that we really always  
9 thought it was acetaldehyde, that was just false.

10 A. I don't believe I said we only thought it was acetaldehyde.  
11 In fact, I didn't want it to go just the acetaldehyde route. I  
12 wanted the total picture.

13 Q. Didn't you tell us yesterday that you always thought it was  
14 acetaldehyde?

15 A. No, I don't believe I did. In fact, I did not want the  
16 company to go down the route of only acetaldehyde.

17 Q. You didn't think it was acetaldehyde at all. You put it in  
18 an affidavit. And you said it's not acetaldehyde, didn't you?

19 A. I said in the affidavit at the time I did the literature  
20 search.

21 Q. So we're down to one chemical, aren't we, again, diacetyl?

22 A. No, we're not.

23 Q. Diacetyl is the only chemical left on the list; isn't that  
24 right?

25 A. I don't agree.

1 Q. You never ran a test on diacetyl, did you?

2 A. No, we did not.

3 Q. Now, a test was always possible on diacetyl; isn't that  
4 right?

5 A. I don't think there would be one possible.

6 Q. Well --

7 A. Even NIOSH hasn't been able to do it successfully.

8 Q. Well, let's look at the test that another of the suppliers  
9 of diacetyl did in 1993 on diacetyl. BASF Corporation did a  
10 study in 1993 on exposure to rats to diacetyl; isn't that right?

11 A. They did an acute LD 50 study. It's not the same type of  
12 study.

13 Q. Okay. They did one, didn't they?

14 A. They did an acute study, yes.

15 Q. You didn't do any.

16 A. No, there was no model to do it.

17 Q. Well, let's see what they found when they did the study in  
18 1993. This is a report. You're aware of it.

19 A. Yes, I am.

20 Q. Report, study on the acute --

21 MR. MCCLAIN: Would you go back to the first page,  
22 Scott?

23 Q. Report, study on the acute inhalation toxicity of diacetyl  
24 FCC as a vapor in rats four-hour exposure; right?

25 A. That's correct, acute study.

1 Q. All right. Let's find what they found. Let's look at what  
2 they found. Now, you're right. All the animals died in the  
3 experiment. They were exposed to diacetyl, and they died;  
4 right?

5 A. Correct.

6 Q. Just like Janice Irick.

7 A. It's not the same.

8 Q. She died, didn't she?

9 A. She died, yes.

10 Q. And she was exposed to diacetyl, wasn't she?

11 A. Amongst hundreds of other chemicals.

12 Q. During necroscopy, all animals that died showed general  
13 congestion. Focal hyperemia of the lungs and empty  
14 gastrointestinal tract were seen additionally in animals of the  
15 mid concentration group. Exposure to the high concentration led  
16 to atelectasis and bloody edema of the lungs; right?

17 A. That's what the report says, yes.

18 Q. Bronchial edema and intensified hydrothorax; right?

19 A. Uh-huh, yes.

20 Q. Histopathology in selected organs of single animals from  
21 the mid and high concentration group revealed extensive  
22 hyperemia of the lung, necrosis of the proximal tubules of the  
23 kidneys, and centrilobular swelling of the hepatocytes in high  
24 concentration as well as moderate emphysema and focal hyperemia  
25 of the lungs and peripheral swelling of the hepatocytes in the

1 mid concentration. That's what they found, didn't they?

2 A. For this acute study, yes.

3 Q. Yeah. They found that diacetyl in this group of rats would  
4 cause moderate emphysema.

5 A. At those doses which are extremely high doses for this  
6 particular type of study.

7 Q. What is the safe study? What is the safe dosage?

8 A. There is none.

9 Q. There is none.

10 A. Because that's not been a study done that anybody can do  
11 for this -- the route of exposure in the right animal for a  
12 chronic exposure to diacetyl. This is an acute study.

13 Q. And if you had done such a study --

14 A. If it could be done.

15 Q. -- and recommended -- and recommended to workers working  
16 around diacetyl to use air supplied respirators as you were  
17 recommended to do, you could have avoided most microwave popcorn  
18 workers from getting sick; isn't that right?

19 A. I don't agree.

20 Q. Just like Dr. Lockey said he could have done?

21 A. I don't agree.

22 MR. MCCLAIN: Thank you, Dr. Higley. I don't have any  
23 more questions.

24 THE COURT: Why don't we all take a stretch break.

25 Okay. Please be seated. Thank you.

1 Mr. Meador, you may redirect.

2 MR. MEADOR: Thank you, Your Honor.

3 REDIRECT EXAMINATION

4 BY MR. MEADOR:

5 Q. That was fun, Dr. Higley, wasn't it?

6 MR. MCCLAIN: Your Honor, I object to that.

7 Q. Let me ask you this.

8 MR. MCCLAIN: I object to the comment.

9 THE COURT: Well --

10 MR. MEADOR: I'll move on, Your Honor.

11 THE COURT: Objection's overruled.

12 BY MR. MEADOR:

13 Q. Dr. Higley, Mr. McClain made it sound like NIOSH has firmly  
14 concluded that diacetyl or butter flavoring causes bronchiolitis  
15 obliterans and Kay Kreiss said that in her 2002 article. Do you  
16 agree with that?

17 A. No, I don't agree with that.

18 Q. And why don't you agree with that?

19 A. In the article it talks about dust. It talks about  
20 multiple agents greater than a hundred volatile chemicals, and  
21 the reason diacetyl is in the paper is it's used as a marker and  
22 they continue to call it a marker. It's a marker that they can  
23 measure to figure out what is the total VOC, volatile organic  
24 carbons.

25 Q. I'd like to show you Exhibit 3165. This is international

1 chemical safety card. And would you look at the date of this  
2 card? And what's the date on that?

3 A. 2007.

4 Q. And what does validated mean?

5 A. It means that the previous card which I believe we saw  
6 yesterday was looked at again and it was again validated and the  
7 date it was validated.

8 Q. And we talked about this before, but this is NIOSH and  
9 other governmental agencies?

10 A. That's correct.

11 MR. MEADOR: And could we go to the next page? And  
12 could we blow that up? And could you --

13 Q. This is what NIOSH is saying in 2007. Would you read that  
14 into the record, please.

15 A. Workers exposed to this substance in conjunction with other  
16 substances have found -- have been found to be in an increased  
17 risk of bronchiolitis obliterans. However, the evidence is  
18 inadequate at this time to conclude that it is this specific  
19 substance that is responsible. Health effects of exposure to  
20 the substance have not been investigated adequately.

21 Environmental effects from the substance have not been  
22 investigated adequately. Do not take working clothes home.

23 Q. Does this sound like NIOSH has made a final determination  
24 on this issue?

25 A. No, they haven't made a final determination.



1 Q. And have they promulated (sic) any governmental standards  
2 to regulate diacetyl in the workplace?

3 A. They don't promulgate regulations. OSHA does, and OSHA  
4 hasn't done so.

5 Q. So OSHA hasn't followed up --

6 A. On a regulation? No, not now.

7 Q. Now, you indicated in your testimony that NIOSH has done  
8 some animal studies, but there's been some problems with those  
9 studies?

10 A. Yeah.

11 Q. And tell me what those problems are.

12 A. Hubbs has done a couple studies. In even one of the  
13 conclusions of one of her papers, she mentions that because rats  
14 are nose breathers, you know, you can't really conclusively  
15 determine -- you can't get it -- you can't extrapolate, excuse  
16 me, from the animal to the human. And in her studies, the  
17 effects have been in the nasal area, and some of the conclusions  
18 are that it's not even -- she can't even get it into the more  
19 distal parts of the lung.

20 Q. The studies only have shown damage in the upper airways and  
21 the throat?

22 A. Yes, in the upper airways, yes.

23 Q. So they haven't shown any damage in the area where you find  
24 bronchiolitis obliterans.

25 A. Correct.

1 Q. And what is the problem with extrapolating for rats and  
2 their nose? Can you elaborate on that?

3 A. The problem is rats only breathe through their nose,  
4 whereas humans breathe through the mouth and their nose. So the  
5 method of exposure and the route of exposure is different  
6 between the two species.

7 Q. And you were asked some questions about a BASF study?

8 A. Correct.

9 Q. And what's an LD 50 study?

10 A. An LD 50 study is one that you conduct to determine -- it  
11 can be by ingestion or dermal or inhalation. And it's to find  
12 out what is the dose at which 50 percent of the animals that you  
13 subject -- you have in the experiment die. So what you're  
14 looking for is what's the dose that would cause an acute effect  
15 that somebody -- it would be acutely toxic and they would die  
16 immediately from that exposure.

17 Q. And what, if anything, can you conclude from that study?

18 A. I think the doses of the acute were somewhere between  
19 two -- greater than two milligrams per liter, but it's in a  
20 whole animal cage, so extrapolating that to milligrams per  
21 kilogram is really quite high. I don't have the numbers in my  
22 head.

23 Q. And in that study they found some damage to one rat, right,  
24 that it died?

25 A. Yes.

1 Q. But the other rats lived.

2 A. The other rats lived, yeah. That's what you need -- you  
3 need some of the rats to live for an LD 50 study. You want the  
4 dose at which 50 percent die and 50 percent live.

5 Q. Now, this BASF study is a separate company from you?

6 A. Yes.

7 Q. And that study wasn't published till 2001?

8 A. It was not made available till much later.

9 Q. Now, you mentioned the concept of dose, and we're going to  
10 talk more about that later in the case, but could you just  
11 explain what dose means?

12 A. Dose is the amount of material that's not only  
13 administered, but it's also in many cases the amount of dose --  
14 the amount of material that's available at the site at which  
15 you're trying to investigate.

16 So, I mean, from an ingestion point of view, there's  
17 many materials that maybe you ingest but they never get  
18 metabolized, so the dose would be lower. So it depends on  
19 how m -- you're giving so much to an animal, and it's not  
20 always -- a hundred percent of it is not always available at the  
21 target organ site.

22 Q. Now, in terms of the conclusions Dr. Lockey reached  
23 regarding acetaldehyde, the two workers that he called the index  
24 workers, they actually had been exposed to a high level of  
25 acetaldehyde. There was an accident in the workplace?

1 A. That's correct.

2 Q. And that was the two women we've talked about?

3 A. The two women, yeah, yeah.

4 Q. And they actually had chemicals explode into their face?

5 A. Well, they had the volatiles from it when they opened the  
6 tank. It was pretty clear there was acetaldehyde. There was  
7 nothing much else in the formulas at the time.

8 Q. Could you --

9 THE COURT: Mr. Meador, could you try asking a  
10 nonleading question for a change?

11 MR. MEADOR: Sure, Your Honor.

12 THE COURT: Every one's been leading.

13 BY MR. MEADOR:

14 Q. With respect to Walt Vaske -- we've talked about him -- was  
15 there any evidence that he had been exposed to high doses of  
16 acetaldehyde?

17 THE COURT: That's a leading question, so you need to  
18 start asking nonleading questions.

19 MR. MEADOR: Sure, Your Honor.

20 BY MR. MEADOR:

21 Q. At the time of the work comp., what was your understanding  
22 as to what he had been exposed to?

23 A. Walt Vaske worked in a different department, so I recall  
24 when we looked at the ingredients that were used in that  
25 department, you know, diac -- acetaldehyde was not on the list.

1 He was probably more exposed to enzymes and some other  
2 ingredients. Acetaldehyde in my opinion and the team's when we  
3 looked at acetaldehyde going -- again, I think I said it  
4 earlier -- going down the route that it was only acetaldehyde  
5 was not prudent because of the other potential cases. We could  
6 not connect their respiratory illnesses or events to exposure to  
7 acetaldehyde. So again, two cases, yes. But the other cases,  
8 no.

9 MR. MEADOR: Thank you. I don't have any more  
10 questions.

11 THE COURT: You may step down. Thank you.  
12 Ready to call your next witness?

13 MR. PAGLIARO: Your Honor, may I read some  
14 stipulations to the jury?

15 THE COURT: Yes. And let me just remind the jury. I  
16 told you in the preliminary instructions -- I believe it was  
17 instruction number 4 -- that one of the ways evidence comes in  
18 would be a stipulation, and a stipulation is simply an agreement  
19 between the parties that certain facts are true. And then in  
20 this case the parties were -- are allowed to read the  
21 stipulation at any time, any portions of the stipulation.

22 So, Mr. Pagliaro, you may do the stipulations at this  
23 time.

24 MR. PAGLIARO: Thank you, Your Honor. I'll just turn  
25 this on so they can hear me. Diacetyl is one of the chemicals

1 that Fries & Fries, Tastemaker, and Givaudan have used to make  
2 flavors. Fries & Fries, Tastemaker, and Givaudan have each  
3 manufactured butter flavoring at the Carthage plant.

4 Fries & Fries, Tastemaker, and Givaudan did not  
5 manufacture diacetyl. Fries & Fries, Tastemaker, and Givaudan  
6 each purchased their diacetyl from companies who manufactured or  
7 supplied diacetyl. The butter flavoring sold to American Pop  
8 Corn Company -- excuse me, American Pop Corn contained diacetyl.  
9 Excuse me, Your Honor.

10 Givaudan operates a plant in the Carthage section of  
11 Cincinnati, Ohio, that makes flavorings for use in food and  
12 beverages.

13 American Pop Corn located in Sioux City, Iowa, makes  
14 Jolly Time microwave popcorn using butter flavoring. Butter  
15 flavoring is used in American Pop Corn's Jolly Time microwave  
16 popcorn to give it a buttery taste and buttery aroma. American  
17 Pop Corn does not manufacture food flavors.

18 The Flavor Extract Manufacturers Association, FEMA, is  
19 a trade association representing companies in the flavoring  
20 business. On December 8, 1992, Mike Davis, Karen Duros, Nancy  
21 Higley, and John Hochstrasser, among others, met as part of a  
22 Tastemaker task force to investigate the possibility that  
23 respiratory conditions observed in a few of its employees might  
24 be related to their work in the Carthage plant.

25 On March 29, 1994, Tastemaker retained Dr. Stuart

1 Brooks, M.D., an occupational medicine physician, to assist the  
2 company in investigating the possible work-related respiratory  
3 health conditions of some employees. Tastemaker sent a final  
4 payment to Dr. Brooks on August the 7th, 1995, for his work.

5 In 1995 Tastemaker retained expert consultants from  
6 the University of Cincinnati to try to determine whether there  
7 was pulmonary disease in some of its employees, what the  
8 pulmonary disease was, and what the potential causes of disease  
9 were. The specialists included Dr. Roy McKay, a pulmonary  
10 toxicologist and an expert in respirators and pulmonary function  
11 testing; Dr. James Lockey, an occupational medicine physician;  
12 and Dr. Susan Pinney, an epidemiologist, open parens, the  
13 Cincinnati experts, close parens.

14 Prior to August 1, 2002 -- prior to an August 1, 2002,  
15 study published in the New York (sic) Journal of Medicine called  
16 Clinical Bronchiolitis Obliterans in Workers At a Microwave  
17 Popcorn Plant, it was not known in the general medical or  
18 scientific communities that there could be any connection  
19 between using butter flavorings containing diacetyl and the  
20 potential for that lung disease.

21 Mr. Kuiper filed this lawsuit on January 30, 2006.  
22 Mr. Kuiper began working at American Pop Corn's Sioux City plant  
23 on or about September 10, 1986. Plaintiff Ronald Kuiper worked  
24 at the American Pop Corn plant some time in '85 or early '86  
25 until late 2004 or early 2005. Mr. Kuiper's first position at

1 American Pop Corn was in the corn shelling area. Mr. Kuiper  
2 became a janitor in the microwave section of the American Pop  
3 Corn plant some time in 1991. Mr. Kuiper worked as a janitor  
4 for approximately one year. Approximately one year after  
5 becoming a janitor, Mr. Kuiper took a position as a mixer in the  
6 mixing room. Mixers at American Pop Corn clean and sanitize the  
7 mixing tanks as part of their jobs. Mr. Kuiper did not wear a  
8 respirator when he cleaned the mixing tanks.

9           Greg Hoffman is an employee of the American Pop Corn  
10 Company, and he is currently the vice president of production.  
11 Greg Hoffman began working in the Sioux City plant in 1989 in  
12 the field department in which he was responsible for the growing  
13 crop and everything up through the packaging process of the  
14 popcorn. Greg Hoffman was a human resources director at  
15 American Pop Corn starting in approximately 1993, 1994.

16           Dale Hartshorn has been the microwave product manager  
17 at American Pop Corn since the fall of 1988. In early 1989,  
18 American Pop Corn workers, including Dale Hartshorn, experienced  
19 eye irritation during the mixing process. Mr. Hartshorn  
20 contacted FONA regarding the eye irritation incident.

21           Thank you, Your Honor.

22           THE COURT: Thank you. Would now be a good time to  
23 take our recess rather than just getting in a couple of minutes  
24 into the first witness?

25           MR. PAGLIARO: I think so, Your Honor.



1 THE COURT: Okay. Thank you. Members of the jury,  
2 let's see here. We'll be in recess until 10:20. And remember  
3 keep an open mind till you've heard all of the evidence, and  
4 we'll see you back here at 10:20. Thank you.

5 (The jury exited the courtroom.)

6 THE COURT: Anything we need to take up?

7 MR. MEADOR: No, Your Honor.

8 THE COURT: Okay. Thank you.

9 (Recess at 9:53 a.m.)

10 THE COURT: Ready to call your next witness and ready  
11 to have the jury brought in?

12 MR. PAGLIARO: Yes, Your Honor.

13 THE COURT: Okay. Thank you.

14 (The jury entered the courtroom.)

15 THE COURT: Thank you. Please be seated.

16 Mr. Pagliaro, ready to call your next witness?

17 MR. PAGLIARO: Yes, Your Honor. Thank you.

18 THE COURT: And who would that be?

19 MR. PAGLIARO: David Bratton, Your Honor.

20 THE COURT: Thank you.

21 DAVID BRATTON, DEFENDANT'S WITNESS, SWORN

22 THE COURT: Thank you. Please be seated in the  
23 witness box. You can adjust the chair and the microphones so  
24 you can speak directly into them. And would you tell us your  
25 full name, please, and spell your last name.

1 THE WITNESS: My name is David Patrick Bratton,  
2 B-r-a-t-t-o-n.

3 THE COURT: Thank you.

4 Mr. Pagliaro?

5 MR. PAGLIARO: Thank you, Your Honor.

6 DIRECT EXAMINATION

7 BY MR. PAGLIARO:

8 Q. Mr. Bratton, where do you work currently?

9 A. I work for Givaudan Flavors Corporation in Cincinnati,  
10 Ohio.

11 Q. And what do you do for Givaudan?

12 A. I am a flavorist.

13 Q. Mr. Bratton, could you explain to the Court and the jury  
14 what a flavorist is, please.

15 A. Certainly. Flavorist is a person who puts together a  
16 variety of chemical and natural ingredients to make flavor  
17 compositions when our customers request us to do so for their  
18 products.

19 Q. And have you actually created flavors yourself, sir?

20 A. Yes, I have, many.

21 Q. And could you again tell us what types of flavors you  
22 yourself have created or worked on.

23 A. I've done a very wide variety, a lot of chocolate flavors,  
24 vanilla flavors, what we call sweet brown which is butterscotch,  
25 caramel, and toffee, butter flavors for microwave popcorn, fruit

1 punch, tropical flavors, again, a very wide variety.

2 Q. Now, you've told us you work currently at Givaudan. How  
3 long have you been employed there, sir?

4 A. I've been there 25 years. I started in February 1984.

5 Q. You were there when it was Fries & Fries?

6 A. Yes, it was Fries & Fries then.

7 Q. And then Tastemaker; is that correct?

8 A. It became Tastemaker in 1992, and then we were purchased by  
9 Givaudan in 1997.

10 Q. Tell us a little bit about Givaudan.

11 A. Givaudan is a large -- largest flavor and fragrance company  
12 in the world. I work for the flavor side obviously. And we do  
13 a wide variety of flavors for virtually any packaged food  
14 product you could imagine. If you walk through the grocery  
15 store except for the produce section and the fresh meat section,  
16 virtually any packaged food product has added flavoring in it,  
17 and that's what we do. That's what we do as a company.

18 Q. Now, do you work at all on issues relating to the  
19 ingredients in the materials besides the flavoring?

20 A. We do to a degree. We have an initiative in what we call  
21 health and wellness, and that's in response to the trend of  
22 companies wanting to lower salt, lower fat, and lower sugar in  
23 their products, and we devise and design flavors to help make  
24 those products taste better and taste more like their original  
25 form if you will.

1 Q. Mr. Bratton, have you ever made any butter flavors for  
2 microwave popcorn products?

3 A. Yes, I have, quite a few.

4 Q. And how long have you been doing that, sir?

5 A. I began on butter flavors for popcorn in 1992. My former  
6 boss had done the work, and he left the company, so it fell to  
7 me.

8 Q. Now, you testified you were a flavorist at Tastemaker in  
9 the early to mid '90s; is that correct?

10 A. That's correct. I became an independent flavorist in about  
11 1989.

12 Q. Were you involved in any of the investigations relating to  
13 lung conditions among the workers in the Carthage plant at that  
14 time?

15 A. I was not. I did not work in the plant. I worked in a lab  
16 in a separate building.

17 Q. Now, would you explain to the jury how you become a  
18 flavorist. How do you get trained to be a flavorist, sir?

19 A. Well, at the time I went through it it was essentially an  
20 apprenticeship. I spent about two years each with two different  
21 much more senior flavorists in the company, and it was  
22 essentially a learning by doing or an immersion kind of a thing.  
23 You work for them. You see the materials they use, why they use  
24 them, and you start to learn what materials give what flavor and  
25 what aspects of what flavor. And along the way you're also

1 started to be given some of your own project work to do and  
2 participate in. And if all goes well and you show the  
3 inclination to be able to make good flavors, then at some point  
4 they cut you loose, make you independent.

5 Q. So is there a formal academic training that you go to to  
6 become a flavorist?

7 A. There is not. There's a more formal program at Givaudan  
8 now these days, but back when I went through, it was mostly the  
9 apprenticeship.

10 Q. And what's your academic background, your schooling  
11 background?

12 A. I have a bachelor of science in mineralogy and a bachelor  
13 of arts in chemistry from IM University in Oxford, Ohio.

14 Q. Just a tiny bit of history here, Mr. Bratton. Could you  
15 tell us about when flavorings were first developed?

16 A. Yeah. It for the most part goes back to probably late  
17 1800s, early 1900s. Partly along with the advent of distilled  
18 alcohol, once distilled alcohol became available, there was  
19 obviously a desire to consume it, but it doesn't taste very good  
20 by itself. And people started looking at things that could be  
21 added to the alcohol to make it more palatable, things like  
22 vanilla and cinnamon and ginger and anise, spices and things  
23 like that. And that led to flavored solutions that could be  
24 then used to flavor other products.

25 Q. Now, the jury's heard about synthetic flavors versus

1 natural flavors. Could you explain what a synthetic flavor is  
2 to the jury from the standpoint of a flavorist?

3 A. Certainly. As you said, there are synthetic flavors and  
4 then natural flavors. The difference is in the derivation of  
5 the ingredients. The chemical ingredients in two flavors may be  
6 identical. But synthetic flavors are made from ingredients  
7 derived by artificial means, whereas natural flavors are made  
8 from components made by natural means and natural processes, and  
9 those are specified -- the FDA specifies what constitutes a  
10 natural material by its processing.

11 Q. Now, you say the FDA specifies. What's the FDA?

12 A. Food and Drug Administration.

13 Q. And they have a rule about what you call natural products?

14 A. They have guidelines for how something can be processed or  
15 extracted or treated to still be considered a natural product.  
16 If it falls within those guidelines, it can be called a natural  
17 material or natural product. If it falls outside those  
18 guidelines, it's probably going to be called a synthetic  
19 material.

20 Q. Do flavoring products that you have created contain  
21 chemicals, Mr. Bratton?

22 A. They do. They're composed for the most part of chemicals,  
23 but, you know, everything pretty much is. We are -- you know,  
24 an apple as it hangs on the tree is -- tastes the way it does  
25 because of the chemicals in it.

1 Q. Do the manufacturers of food know about the use of  
2 chemicals in the flavoring products that you mix and sell?

3 A. Yes, they do.

4 Q. How do you know that?

5 A. Well, depending on the customer and the project, we may  
6 discuss specifics of some of the flavor compounds we're going to  
7 use. It depends on our relationship with the customer.

8           Beyond that, once a flavor moves down the road toward  
9 being commercial, there are documents that accompany it. You've  
10 heard of MSDSs. We also issue ingredient statements and usually  
11 an allergen declaration that our customer asks for as well.  
12 These are very common documents. And although they don't give  
13 away the exact formulation of the flavor, they give an idea of  
14 the kinds of ingredients that are in it.

15 Q. Now, describe for us how flavors come to be made at a  
16 company like Givaudan. What's the process that is involved in  
17 coming up with a flavor?

18 A. Normally we are approached by our customer with a project.  
19 Well, there are kind of two ways that are somewhat different.  
20 The first one we call a matching or duplication project where a  
21 customer will bring us a flavor that they have from another  
22 flavor company, and for reasons of their own they wish to buy it  
23 from someone else. They may be dissatisfied with the company.  
24 They come to us and say, "Here's this flavor. We'd like to see  
25 if you can duplicate it so we can buy it from you instead of the

1 other company."

2 Q. So a food company can come to you with a flavor that they  
3 already have bought or used and say, "See if you can match this  
4 or recreate it"?

5 A. That's correct, yes.

6 Q. You said there were two types. What's the other type?

7 A. Right. And the other way is what we call more open  
8 creation where the project is not as specific but they will come  
9 to us and say, "We're looking to put out a line extension of a  
10 given product, and the flavors we have in mind are cherry,  
11 grape, fruit punch, and raspberry," and they'll give us  
12 guidelines that meet their needs, and we will put flavors  
13 together against that request.

14 Q. Now, Mr. Bratton, are you familiar with a term called  
15 flavor profile?

16 A. Yes, I am.

17 Q. Is that used in your business?

18 A. It's used all the time.

19 Q. What is a flavor profile, Mr. Bratton?

20 A. The profile is the actual character of the flavor, the way  
21 it tastes in the mouth. As an example, you know, strawberry is  
22 strawberry, but a fresh strawberry tastes very much different  
23 than a jar of strawberry preserves. Both are strawberry, but  
24 they have a very different profile or character.

25 Q. Mr. Bratton, do you work or collaborate with your customers



1 in coming up with flavors?

2 A. Yes, we do. That's very frequent on a typical project.

3 Q. And do you know how your customers use your flavors in  
4 their plants?

5 A. Normally we know the end product, what their end product is  
6 going to be, but we normally do not know their specific recipe  
7 for everything that goes into their product, nor do we know for  
8 sure or necessarily know absolutely exactly how they process and  
9 make that product. Some of that they consider their own  
10 proprietary information.

11 Q. So a customer would tell you they want to use a certain  
12 flavor and they want a certain flavor profile. Then what do you  
13 do next to come up with a flavor?

14 A. On a normal project, if it's a reasonable-sized project,  
15 there's probably more than one flavorist involved, and the ones  
16 who are involved will create or submit flavors against it.  
17 We'll do an internal screening or maybe more than one to  
18 determine what our best candidates are for that project. And  
19 once we are satisfied and have our best candidates, we will then  
20 send those to the customer communicating to them that they're  
21 coming and to know what to expect.

22 Q. And then what happens after you send it on to the customer?

23 A. They do their evaluation. Sometimes they do an initial  
24 evaluation and come back to us very quickly and ask for changes.  
25 They say, "We like this one, the other two we don't like, but

1 can you modify this one in one way or another?" It's possible  
2 they find something they like right away. That's rare, but it  
3 does happen. But it's usually an iterative process, a  
4 back-and-forth process.

5 Q. Do they ever run taste tests?

6 A. They do. One of the steps down the road once they have a  
7 flavor or a few flavors they're relatively satisfied with, the  
8 next step is often to go to a consumer test where they'll put  
9 the product in front of their expected consumers for that  
10 product and get guidance on what flavor profile those consumers  
11 like best.

12 Q. And what makes a flavor acceptable or a winning flavor to  
13 your customers, Mr. Bratton?

14 A. For the customers to accept it and finally purchase it, it  
15 has to, you know, meet their needs as far as taste. Again,  
16 frequently with the larger food companies, a taste panel or  
17 consumer panel's involved. That tells them what flavor people  
18 will like best. It has to process well in their plant with no  
19 issues. It has to meet their regulatory guidelines, whether  
20 they want a natural flavor or artificial flavor. May need to be  
21 kosher. There are a number of considerations that go into it.

22 Q. Mr. Bratton, how is a product defined in the flavor  
23 business?

24 A. A product is defined by the functionality of the flavor,  
25 does it work and how well does it work in the product and also

1 the character or profile it brings to the product. Products are  
2 differentiated in large part by how they taste. The flavor  
3 sets, for example, one popcorn product apart from the other  
4 brand from the other brand.

5 Q. Who would determine the flavor profile of a product?

6 A. Ultimately our customer along with their consumers  
7 determine that.

8 Q. And during the course of developing that flavor profile, is  
9 there dialogue between a company like Givaudan and a company  
10 like APC in development of a product?

11 A. Definitely. They were very active and very open in their  
12 feedback and their back-and-forth dialogue with us to get to the  
13 profiles they wanted.

14 Q. And you know this because you interacted with APC?

15 A. I did as well as the person in our lab that also makes the  
16 actual popcorn. Usually when we send them a flavor, we send  
17 them popcorn along with them to save them a bit of time so they  
18 can pop right away. So it was myself or the person that was  
19 making the popcorn.

20 Q. Now, during your years of working on the development of  
21 flavors for microwave popcorn, have some issues arisen over the  
22 years?

23 A. In the development stage, the most common issue was impact  
24 or intensity. And I've worked on --

25 Q. Would you explain that to the jury? What's impact mean?

1 A. Certainly. Impact is the amount of flavor, the strength or  
2 intensity of flavor, you taste when you eat the product.

3 It's -- for comparison, like an Altoid versus a -- maybe a stick  
4 of gum that's much more mildly flavored. The impact is that  
5 intensity or the amount of flavor you perceive, yeah.

6 Q. What other issues have come up or complaints? Have you had  
7 any complaints about butter popcorn flavors?

8 A. Complaints, there are few fortunately. They're not very  
9 frequent. Sometimes performance of the flavor as far as its  
10 shelf life. Microwave popcorn has to have a one-year shelf  
11 life. Sometimes the flavor doesn't hold up as long as they  
12 would like it to and keep its character. There have been a  
13 couple of occasions where some offnotes or offcharacters have  
14 been generated over time.

15 Q. Offnotes sounds like a musical term. What does that mean?

16 A. Offnote is a note that may be an interaction of the flavor  
17 with something in the base of the product, the fat or the corn  
18 or something elsewhere where over time there's an interaction  
19 that happens that causes a note or an aspect of the flavor  
20 that's unexpected and usually undesirable. Again, it's rare,  
21 but it happens.

22 Q. When a microwave popcorn company like APC, American Pop  
23 Corn, puts together the product that it sells to the public and  
24 there's butter flavoring in it, is that the only thing that goes  
25 in the bag beside the kernels?

1 A. No. Typically it's corn, vegetable oil, salt, color, and  
2 flavor, and it's fairly common -- what I was going to say a  
3 minute ago, I've done work for most of the major popcorn brands  
4 that are sold here in the U.S. It's pretty common for them to  
5 use more than one flavoring in a given product as well. And we  
6 don't always know that. If it's not ours, we don't always know  
7 that.

8 Q. Now, if you got a complaint -- you talked about complaints  
9 from customers. If you get a complaint, what do you do about  
10 those reports from your customers?

11 A. There's a procedure. We respond right away. It typically  
12 goes through our customer care area directly to our quality  
13 control area to begin investigating. And when it's a  
14 flavor-related issue, the flavorist who created the flavor is  
15 typically pulled in at the very beginning as well. And then we  
16 begin an investigation both with my input and QC's investigating  
17 to try to figure out what might be going on.

18 Q. Have there been any complaints about physical reactions to  
19 the butter flavoring that's used?

20 A. There was one that I dealt with that involved skin  
21 irritation from use of a flavor, yes.

22 Q. And what was your reaction to that if that happens?

23 A. It was handled like any other issue or any other complaint.  
24 I was engaged right away in working with the customer. That was  
25 a very open from both sides exchange of information, and it

1 actually became a running two-year project to put the flavor  
2 into a different form and package it in different packaging and  
3 everything so it could be handled hands off.

4 Q. Now, you know a company called American Pop Corn here in  
5 Sioux City?

6 A. Yes, I do.

7 Q. And I think you testified you made some microwave butter  
8 popcorn flavors for APC?

9 A. I have.

10 Q. Which ones? Could you tell the jury which ones you worked  
11 on, Mr. Bratton?

12 A. Yes. I've worked on the Butterlicious butter flavor, the  
13 Butterlicious light, a butter flavor for their Healthy Pop  
14 product, and we also worked on a product called Blast O Butter,  
15 but we wound up not getting that business. It went to a  
16 competitor of ours, but we worked on that one as well.

17 Q. Now, the communication process you described about getting  
18 the flavors and developing them, did you go through that process  
19 with APC?

20 A. Typically we did, yes. We would make a submission. They  
21 would taste and give us -- they were very good about feedback.  
22 It was immediate.

23 Q. Do you know whether or not APC knew there was diacetyl in  
24 their butter flavors?

25 A. They did.

1 Q. How do you know that?

2 A. There were communications with their product developer  
3 where I know it was brought up and it was specified. Again, it  
4 was very commonly known. When they talk about up-front impact  
5 or they wanted more immediate impact, that word and that  
6 ingredient came up frequently because it's what gives immediate  
7 impact to the flavor.

8 Q. Now, you talked about the flavor impact and the flavor  
9 profile, but you also talked about function. I'm going to ask  
10 you to elaborate a little bit about function. What's the  
11 function for butter flavors in a microwave popcorn product  
12 that's sold to the public?

13 A. In the microwave bag, as I said a few minutes ago,  
14 microwave popcorn is to have a one-year shelf life, so the  
15 flavor has to be long lasting in the bag. It delivers the  
16 impact and the character of butter that the customer wants. It  
17 has to survive the microwave environment. When it's popping, a  
18 microwave bag gets to between four or five hundred degrees  
19 Fahrenheit, very hot, and it's also a high-moisture environment  
20 once the kernels start to pop, and the flavor has to survive  
21 that environment well enough to still put -- still deliver  
22 flavor to the kernels so they taste the way they want it to  
23 taste.

24 Q. What environmental functions affect butter flavoring in the  
25 context of the microwave popcorn products?

1 A. Depends on the form of the flavor. If it's a -- spray dry  
2 was mentioned earlier. If it's a spray dried or powdered  
3 flavor, a very high-moisture environment will start to soften or  
4 dissolve those particles. A spray dry par -- or spray dry is  
5 what you might use in a Kool-Aid dry mix or a soup or gravy dry  
6 mix, and it also works well in popcorn. But it dissolves in  
7 water, but it's not soluble in the fat that's in the popcorn  
8 bag, so it works well for popcorn. It just, you know, is inert  
9 in the fat. And that's part of why it has such a good shelf  
10 life.

11 Q. Does it volatize as quickly as a liquid?

12 A. No. Spray dry has very, very little free chemical material  
13 of any kind to be volatilized.

14 Q. What's the flavor profile you talked about? What is that  
15 for microwave popcorn?

16 A. Well, typically in my experience for all the customers we  
17 work for, again, the biggest thing was high intensity, high  
18 impact. It's gotta be strong. It's gotta have what we call top  
19 note which is the initial burst, if you will, or hit of flavor.  
20 Pretty much across the board high impact was desired.

21 Q. And what -- you talked about high impact. What did you use  
22 as a flavorist in response to this request for high impact in  
23 the flavors to deliver that high impact?

24 A. The most common by far was diacetyl, and then we used a  
25 variety of other compounds with it: acetylene, butyric acid,



1 lactones, a variety of other things. But diacetyl was the  
2 up-front impacting character.

3 Q. Does that give the biggest impact?

4 A. Yes, it does.

5 Q. Now, can you substitute one of those materials you  
6 mentioned for the other?

7 A. I don't believe so. We've to this day continued to work on  
8 replacing diacetyl, and we found nothing or seen nothing that  
9 replaces it and gives that immediate buttery impact and  
10 identity.

11 Q. Now, you mentioned the flavor impact and the chemicals you  
12 used. Why didn't you just use natural butter for these customer  
13 requests and needs?

14 A. Natural butter is -- well, for one it's very high in  
15 moisture. Butter is about 18 percent moisture. And if you put  
16 it in a microwave bag at any kind of a level, it would hurt the  
17 shelf life. It may even mold over time with that much moisture  
18 in it.

19 Also, butter on its own if anyone's ever just tasted  
20 straight butter, it's not very strong in flavor and would not --  
21 would not deliver the profile or the impact the customers want.

22 Q. You mentioned the term spray dry before. What does that  
23 mean? Would you explain that to the jury?

24 A. Yeah. Spray drying is a process that has been around for  
25 40-plus years I guess, and it's a process by which a liquid

1 flavor concentrate is turned into a powdered form for some of  
2 the food products I mentioned before. And it's a pretty simple  
3 process. It's a mixture of water and things like modified food  
4 starch, and then the flavor chemicals are actives themselves.  
5 And an emulsion is made of that, and then it's sprayed under  
6 heat and pressure to drive the water off.

7           Essentially what it does is the starch wraps around or  
8 encapsulates the flavor actives and protects it. And again,  
9 that particle is water soluble, not fat soluble. So until that  
10 particle sees a lot of moisture, the flavor is trapped in there  
11 pretty well. And again, that's part of what plays into its long  
12 shelf life.

13 Q. And what does that mean when you put it in oil in a mixing  
14 situation?

15 A. Unless there's an excess of moisture in the oil which there  
16 should not be, that flavor particle is essentially inert. It  
17 just sits in the oil, and again, that's part of what gives it  
18 its long shelf life.

19 Q. And how is it meant to be released?

20 A. It releases in the bag -- again, popping corn is I believe  
21 about 14 percent moisture, and the kernels explode because they  
22 get hot enough that the water inside turns to steam and the  
23 kernel explodes. So when that moisture's put out into the  
24 microwave bag, that amount of moisture starts to dissolve and  
25 release the flavor, and you get the aroma from it and also taste

1 on the popcorn.

2 Q. You mentioned in an answer a couple questions ago something  
3 called flavor actives. What are flavor actives?

4 A. They're the actual chemical components that make up the  
5 flavor and its taste, the diacetyl and butyric acid and the  
6 other things I mentioned.

7 Q. Now, you mentioned about products Givaudan and Tastemaker  
8 sold to APC. Were they -- what types of products were they?  
9 Let me ask you that question.

10 A. Two or three of them were spray dries, one I believe is  
11 still selling is a liquid.

12 Q. Okay. And what was the liquid? Do you know?

13 A. That was -- I believe its number's 297373. It was for the  
14 Healthy Pop product.

15 Q. And is there a product also that you made with spray dry  
16 suspension in oil?

17 A. I didn't make those. My former boss did. They were older  
18 flavors. They were -- essentially the main part of the flavor  
19 was still in powdered form, but it was dispersed in a solid fat  
20 that kind of had the consistency of Crisco. So it was a  
21 scoopable kind of a material.

22 Q. Gotcha. Have you recently developed a new line of  
23 butter-flavoring products for microwave popcorn?

24 A. Yes, I have.

25 Q. Were you able to redesign your old flavors?

1 A. Some of the same materials were used, but they are -- they  
2 are different flavors. And as we did that work for our  
3 customers, you know, we tried to set and I tried to set the  
4 expectation at the beginning that we would not be able to match  
5 the existing diacetyl-containing flavors and they had to have  
6 some openness to a different profile because we would not be  
7 able to match that profile.

8 Q. These products you can make now, couldn't you have just  
9 made them in the past?

10 A. All the materials were there to make them. They could have  
11 been made, but based on what was in the market and what our  
12 customers were wanting, I don't believe their impact would have  
13 been acceptable.

14 Q. Did removing diacetyl change what you call the flavor  
15 profile of the butter flavoring that you sold?

16 A. Yeah, generally it did, yes.

17 Q. In what respect, sir?

18 A. They no longer had that immediate identifiable buttery hit.  
19 Diacetyl's a very one-dimensional, very singular butter kind of  
20 a component. And it's also fairly aromatic. It's got strong  
21 initial taste, and the flavors now don't have that character.  
22 They lack that character.

23 Q. And what has the response been to your customers to this  
24 different flavor profile?

25 A. Well, we've heard from two of our customers that their

1 business is down or was down for 2008 about 10 percent. We were  
2 actually contacted -- I was this week -- that, in fact, American  
3 Pop Corn wants to work with us to redesign or rework one of  
4 their products because it's not performing well in the market.

5 Q. Is a new butter flavor without diacetyl the same product as  
6 a flavor made with diacetyl?

7 A. The packaging may be the same. It may, again, by package  
8 still be the same, but the character is different.

9 MR. PAGLIARO: I have no further questions, Your  
10 Honor. Thank you very much.

11 THE COURT: Thank you.

12 Mr. McClain?

13 MR. MCCLAIN: Yes.

14 CROSS-EXAMINATION

15 BY MR. MCCLAIN:

16 Q. Good morning, Mr. Bratton. You and I met in the hallway  
17 for the first time. I -- you can clear up something for us that  
18 Ms. Higley didn't know. The flavor 29273 (sic) that you told us  
19 about that you made --

20 A. Yes.

21 Q. -- she said she didn't know when we looked at the material  
22 safety data sheet whether it contained diacetyl. It did, didn't  
23 it?

24 A. Yes, it did.

25 Q. It contained about 10 percent diacetyl, didn't it?

1 A. That's correct.

2 Q. Thank you. So when she said that she didn't know whether  
3 or not the MSDS that was sent to American Pop Corn Company  
4 should have warned about the dangers of diacetyl, from your  
5 perspective it contained diacetyl. It should have warned about  
6 those; isn't that right?

7 A. It did contain diacetyl. Again, the warning of, if that  
8 was appropriate, came from her area or would have come from her  
9 area.

10 Q. Right. But in terms of the thing you can answer, it  
11 contained diacetyl. And, therefore, to answer her question, if  
12 it contained diacetyl, it should have had a warning; right?

13 A. That question is for her, not for me.

14 Q. All right. Now, yes. You have a degree in food science,  
15 not in toxicology; right?

16 A. That's not correct.

17 Q. Your degree's not in food science?

18 A. No, it's not.

19 Q. What's it in?

20 A. I have a degree in mineralogy and also a pre-med. degree in  
21 chemistry.

22 Q. So you have no degree in food science.

23 A. No, I don't.

24 Q. But you were the one they assigned to make the flavors for  
25 American Pop Corn at Givaudan.

1 A. I didn't create the original flavors. They were created by  
2 my prior boss. When he left the company, any changes that  
3 needed to be made to them fell to me.

4 Q. They turned this account over to you.

5 A. The flavor development work, yes, fell to me.

6 Q. You were aware that it was a product for microwave popcorn,  
7 weren't you?

8 A. Yes.

9 Q. And when you say that high impact is the goal, what you  
10 mean is its smell; right? That's the main component of high  
11 impact?

12 A. No, for us taste more than smell.

13 Q. Yeah. But most of taste is smell, isn't it?

14 A. It depends on the product. I don't necessarily agree with  
15 that.

16 Q. Well, I've heard that a major component of taste is smell.  
17 Is that not true?

18 A. It is certainly a component, yes.

19 Q. And one of the things that makes butter-flavored popcorn  
20 taste like butter is its butter smell; right?

21 A. That plays into the taste, yes. It also plays into the  
22 acceptance of the product.

23 Q. And it also contributes to what you call impact; isn't that  
24 right?

25 A. It's an offshoot, if you will, of impact that goes along

1 with it, yes.

2 Q. And to smell it, diacetyl in the product has to be  
3 volatilized; isn't that right?

4 A. Generally that's correct, yes.

5 Q. So the product is designed to volatize diacetyl, isn't it?

6 A. On popping, yes.

7 Q. Now, it's fair to say that you never discussed with a  
8 toxicologist the manufacture of butter flavor before any of  
9 these issues came up, did you?

10 A. No, I didn't.

11 Q. You didn't really expect your customers to go out and talk  
12 to toxicologists about what you were selling them, did you?

13 A. I didn't give that any thought.

14 Q. Well, you didn't expect that the material that you were  
15 selling to them was anything other than food grade; right?  
16 That's what you told them.

17 A. It was made with food-grade materials, yes.

18 Q. And generally regarded as safe.

19 A. That's right.

20 Q. And you mentioned that American Pop Corn knew that diacetyl  
21 was in the product, but what you told them was diacetyl was  
22 generally regarded as safe and it was food grade; right?

23 A. That's correct, and it was, and it still is.

24 Q. There was no representation to American Pop Corn when you  
25 told them the product contained diacetyl that this was a



1 hazardous material in any regard; isn't that right?

2 A. I don't -- that wasn't my job. I don't know that.

3 Q. Well, there's a letter that we have that went to  
4 Mr. Hartshorn in 1990 that we read to the jury yesterday,  
5 Exhibit 1902. It says, "This is a letter in response to your  
6 request for information on Fries & Fries flavor component  
7 diacetyl and delta decalactone and their regulatory status in  
8 West Germany. Diacetyl is a ketone derived from fractional  
9 distillation of a fermentation product of glucose. It's a  
10 natural substance which has been found to occur in a variety of  
11 fruits, vegetables, breads, meats, and dairy products.  
12 Concentrations of .3 to point -- 2.2 ppm have been detected in  
13 butter, 4 to 5.2 parts per million in wine, 15 parts per million  
14 in cognac and whiskey. In the United States diacetyl has been  
15 deemed generally regarded as safe as indicated by designated  
16 FEMA number 2370. It's been approved for food use."

17 MR. MCCLAIN: Go on to the next one, Scott, next  
18 paragraph.

19 Q. And then you go on to talk about that it's a flavor that  
20 can be used in West Germany because in the last paragraph you  
21 say considering the GRAS status of these substances according to  
22 the United States regulation and the clarification (sic) of  
23 these materials as being either natural or nature identical,  
24 both diacetyl and delta decalactone comply with regulations for  
25 use of flavoring components in West Germany.

1           This was consistent with what you knew the guidance to  
2 be from Givaudan to their customers about diacetyl; am I right?

3 A.   Well, what this document speaks to I believe is they were  
4 inquiring about whether flavoring could be used for product if  
5 they decided to sell it in Germany. And this is a regulatory  
6 question speaking to are those items allowed to be used in food  
7 in Germany by German regulations.

8 Q.   You're not suggesting by your answer that Givaudan ever  
9 told anyone that diacetyl was a hazard to them, are you?

10 A.   I don't know that.

11 Q.   Do you know of any instance that they did?

12 A.   It may have been communicated on MSDSs for flavors  
13 containing it, but again, I didn't generate those.

14 Q.   Well, let's look at that. You mentioned that. Let's look  
15 at an MSDS sheet for a flavor that you did manufacture. Let's  
16 look at 1022. This is in 2003. This is the butter flavor that  
17 we talked about that has 10 percent diacetyl. It's got a health  
18 rating of zero. Do you see that?

19 A.   Yes, I do.

20 Q.   Is there anything lower in terms of a health hazard rating  
21 than zero?

22 A.   I don't believe so. I'm not an expert on those ratings,  
23 but I don't believe so.

24 Q.   It means it's inert, doesn't it?

25 A.   I don't know if it means that.

1 Q. Water is rated zero, isn't it?

2 A. I don't know.

3 Q. Well, you know that a health hazard rating of zero means  
4 there is no health hazard; isn't that true?

5 A. I believe that's generally the case, but water can be  
6 hazardous.

7 Q. You rated this stuff zero. The scale is zero to four. Is  
8 there any health hazard associated with something that has a  
9 zero?

10 A. I believe per this designation, it would say there's not.

11 Q. And by the way, you mentioned that you did have some skin  
12 irritation at another plant in Iowa. That was the General Mills  
13 plant; isn't that right?

14 A. Yes.

15 Q. And, in fact, General Mills inquired of Givaudan whether  
16 there were any health effects from breathing this material;  
17 isn't that right?

18 A. I believe that may have been asked along the way.

19 Q. Yeah. And what Givaudan told General Mills is that there  
20 weren't any health effects from breathing diacetyl, didn't they?

21 A. I'm not sure if that was told to them or not.

22 Q. Well, you've heard that, haven't you?

23 A. I don't know if I've heard it with them in that context.

24 Q. Well, the fact is they asked; right? They asked are there  
25 any known health effects from breathing?

1 A. I'm not sure if they asked in those terms.

2 Q. Yeah. Well, that's essentially what they asked.

3 A. I don't know exactly what they asked.

4 Q. And as of 2003 --

5 MR. MCCLAIN: Bring that back up.

6 Q. -- what you were telling the world was there were no health  
7 effects, right, zero?

8 A. Per this document, yes, that's correct.

9 MR. MCCLAIN: And go over to inhalation, Scott, would  
10 you, on page 24 of 27, whatever that page is?

11 Q. By inhalation, you were telling the world in regard to  
12 hazards that there weren't any. None were known; right?

13 A. That's what this document says.

14 Q. And you know as of 2003 that's a false statement.

15 A. I don't know that for sure. I don't believe that.

16 Q. Well, let's see if you do know some other things. You  
17 talked about generally regarded as safe, but even you know that  
18 generally regarded as safe does not mean that it's safe to  
19 inhale; isn't that right?

20 A. Depends on the compound, and it depends on the  
21 concentration.

22 Q. So does that mean yes?

23 A. Means it could be, yes.

24 Q. And before you were deposed in 2006, you were completely  
25 unaware that anybody at the Givaudan plant had developed

1 bronchiolitis obliterans; am I right?

2 A. Yeah. I don't believe I was aware of any of that.

3 Q. You didn't know what they were exposed to?

4 A. Not specifically. Again, I don't work in the plant  
5 so . . .

6 Q. And the fact is is that the first time you heard about  
7 butter being a hazard is when the Jasper popcorn issue became  
8 common knowledge; right?

9 A. I believe so, yeah.

10 Q. Nobody in your plant ever told you about the case histories  
11 of Joey Wallace or Cliff Walker or Mary Sue McGee or Robin  
12 Gaskins or John Chism, your coworkers.

13 A. No, I was not aware of that.

14 Q. And you didn't know even in a general sense that anyone in  
15 the plant had developed any kind of lung problem; am I right?

16 A. I don't believe so until much, much after the fact.

17 Q. But you were required to undergo pulmonary function tests,  
18 but the company never even told you why that was; right?

19 A. I have undergone pulmonary function tests, yes.

20 Q. And the company didn't tell you why.

21 A. It was part of a physical screening.

22 Q. But they didn't tell you that they were doing pulmonary  
23 function tests of all their employees because of this outbreak  
24 of bronchiolitis obliterans, did they?

25 A. I was not aware of that, no.

1 Q. You had no knowledge while you were manufacturing these  
2 facilities (sic) that doctors from the University of Cincinnati  
3 were consulting with your company, did you?

4 A. No, I didn't.

5 Q. And you were never informed that the team assembled had, in  
6 fact, identified very early on diacetyl as being a chemical that  
7 was suspected of causing disease.

8 A. No, I was not aware of that.

9 Q. By the way, you can clear something else up. When you hear  
10 the word irritation, that doesn't mean to you some kind of  
11 irreversible injury; am I right?

12 A. No, it doesn't.

13 Q. And when you hear food-grade material generally, you say  
14 that material is safe. It's generally regarded as safe.

15 A. Is safe at certain levels, yes.

16 Q. Now, you talked about the fact that you're now making some  
17 butter flavors for popcorn companies without adding diacetyl; is  
18 that right?

19 A. That's correct.

20 Q. In fact, the entire microwave popcorn market has pretty  
21 much gone diacetyl free; am I right?

22 A. To my knowledge, yes, it has.

23 Q. And so everyone is making diacetyl-free butter flavor now;  
24 am I right?

25 A. The companies I'm aware of or have dealt with, yes.

1 Q. Out of ingredients that were commonly available as early as  
2 1992?

3 A. I believe so, yes.

4 Q. With methods that were available at that time?

5 A. Yes.

6 Q. And now that people know about the health effects, people  
7 are buying microwave popcorn with butter flavor; right?

8 A. They are, but two of the major companies, their business is  
9 down.

10 Q. Well, you know, yes, I'm sure that that's true.  
11 Everybody's business is down. Isn't that right?

12 A. It was down before this recent economic crash.

13 Q. Well, it's true, isn't it, that everyone's business is down  
14 currently?

15 A. But it was true before this recent economic crash.

16 Q. And still millions of pounds of butter flavor are being  
17 sold in America, aren't they?

18 A. Overall, yes, I would say so.

19 Q. Okay. And as you mentioned, the profile may be somewhat  
20 different, but it still tastes like butter, doesn't it, to you  
21 when you concocted it?

22 A. For the most part it does, but it's different than it used  
23 to be.

24 Q. Yeah. Well, you know, that's kind of the way that we  
25 proceed on these issues in the country. I remember the first

1 time I ever had a Diet Coke. I didn't like it very much. But  
2 as I put on weight, I decided, well, I like Diet Coke a whole  
3 lot better. We kind of get used to different flavors depending  
4 on what their health effects are, don't we?

5 MR. PAGLIARO: Objection to the form of the question.

6 THE COURT: Overruled. You may answer.

7 A. Could you ask again?

8 Q. Yeah. People generally adjust their preferences based upon  
9 what they believe the health effects are of the products; am I  
10 right?

11 A. If they know enough to perceive a health effect, possibly  
12 so. I'm not sure enough of the population knows about this.  
13 And they don't have a choice to consume another product. The  
14 products are all like this now.

15 Q. They're all like this. And so if they want microwave  
16 popcorn, they're going to have to eat diacetyl free; right?

17 A. That's correct.

18 Q. All right. And to the extent that there's any health  
19 effects from mixing up butter flavor in microwave popcorn  
20 plants, that's a good thing, isn't it?

21 A. Depending on what the cause was, it could be.

22 MR. MCCLAIN: Thank you. No further questions,  
23 Mr. Bratton.

24 THE COURT: Mr. Pagliaro, any redirect?

25 MR. PAGLIARO: Just a couple more, Your Honor, please.



1 THE COURT: Sure.

2 REDIRECT EXAMINATION

3 BY MR. PAGLIARO:

4 Q. Mr. Bratton, that formula MSDS that Mr. McClain showed you  
5 during the examination from 2003, was that for butter flavoring  
6 or diacetyl?

7 A. That was for butter flavoring.

8 Q. He asked you about your -- quote, your coworkers. Did you  
9 actually work in the plant during that period of time between  
10 '92 and '96?

11 A. I n -- no, I don't work in a plant. I work in, again, a  
12 separate building.

13 Q. And did you have any part in the investigation -- would you  
14 have had any part in the investigation considering your position  
15 with the company?

16 A. No.

17 Q. Why is that?

18 A. It wasn't in my realm of expertise or knowledge. I  
19 wouldn't have been involved.

20 MR. PAGLIARO: No further questions, Your Honor.  
21 Thank you very much.

22 THE COURT: Thank you. You may step down. Thank you.  
23 And everybody can take a stretch break.

24 And are you ready to call your next witness?

25 MR. PAGLIARO: He's outside, Your Honor.

1 THE COURT: Okay. Thank you.

2 MR. MCCLAIN: Your Honor, could we -- I have a  
3 question at sidebar. I should have raised this earlier. Could  
4 I ask a question, not before this witness? We could do it after  
5 this witness but before the next item of business.

6 THE COURT: Well, why don't we do it during the  
7 stretch break now.

8 (At sidebar on the record.)

9 MR. MCCLAIN: The issue has to do with these two  
10 videos that they're going to play after the next witness. I  
11 think the next witness is going to take us to the noon break  
12 anyway, but I wanted to alert the Court that if they're done  
13 with this witness, we might want to take this up at that point  
14 in time. The two depositions as we reviewed them, the two  
15 doctors that they plan to play don't offer opinions to a  
16 reasonable degree of medical certainty. They were treaters, and  
17 so that's our objection.

18 THE COURT: What opinions are they giving?

19 MR. MCCLAIN: That he has asthma and that he has other  
20 things but asthma for the allergist, and I don't know what the  
21 other guy says he has. What --

22 MR. PAGLIARO: COPD.

23 MR. MCCLAIN: COPD, but they don't offer them to a  
24 reasonable degree of medical certainty in the depositions, so  
25 that's the objection.

1 THE COURT: Do they?

2 MR. PAGLIARO: These are treating physicians, Your  
3 Honor. They're not offered as experts. They're treating  
4 physicians.

5 THE COURT: Yeah, but any opinion of a treating  
6 physician has to be to a reasonable degree of medical certainty,  
7 wouldn't it? I'm not exactly sure. I've never been faced with  
8 this issue.

9 MR. PAGLIARO: Your Honor, typically treaters,  
10 physicians in personal injury cases talk about what they did in  
11 the course of their treatment and what they diagnosed. I mean,  
12 he sort of switched gears when he was asking opinions. But  
13 that's typically not what happens. They get up with their  
14 records and talk about what's in the records.

15 MR. MCCLAIN: The issue -- I raised this -- why I  
16 didn't raise this before this morning, I raised this with local  
17 counsel to be sure I was right about this. He says the standard  
18 in Iowa is to a reasonable degree of medical certainty even for  
19 treaters. That's what my understanding is. If there's some  
20 other research on this issue, you know, I certainly would like  
21 to know about it, but that's what he says.

22 THE COURT: Well, okay. Let me just ask you this. Is  
23 there any way you could restructure your case to put it off till  
24 tomorrow so that I could try and figure this out or --

25 MR. PAGLIARO: Let me check that. If Dr. Repsher's

1 around --

2 THE COURT: But if not, we're not going to get to it  
3 till 12 something?

4 MR. PAGLIARO: Yeah.

5 THE COURT: I'll have an answer. I'll have my --

6 MR. PAGLIARO: This witness should take us to the noon  
7 break.

8 THE COURT: Okay. I'll have it figured out by then.

9 MR. PAGLIARO: Okay. All right. Thanks, Your Honor.

10 THE COURT: I don't want you to have to restructure.

11 MR. MCCLAIN: And I'm sorry that I didn't raise this  
12 to begin with.

13 MR. PAGLIARO: If we have to, we'll do it. Don't  
14 worry about it.

15 THE COURT: Okay. Thank you.

16 (The sidebar was concluded.)

17 THE COURT: Okay. Are we ready for your next witness?

18 MR. PAGLIARO: He's here, Your Honor.

19 THE COURT: Thank you. If you'd please come forward,  
20 I'll swear you in.

21 MR. PAGLIARO: This is Greg Hoffman, Your Honor.

22 GREGORY HOFFMAN, DEFENDANT'S WITNESS, SWORN

23 THE COURT: Okay. Please be seated in the witness box  
24 there. And you can adjust the microphones and the chair so you  
25 can speak directly into the microphones. So we'd ask you to

1   scoot up a little bit.  There we go.  Thank you.  And would you  
2   tell us your full name, please, and spell your last name for us.

3           THE WITNESS:  My name is Gregory Steven Hoffman,  
4   H-o-f-f-m-a-n.

5           THE COURT:  You look a little nervous.  Just take a  
6   deep breath.

7           THE WITNESS:  Very good.

8           THE COURT:  Thanks.

9           Mr. Pagliaro?

10          MR. PAGLIARO:  Thank you, Your Honor.

11          THE COURT:  Whenever you're ready.

12                           DIRECT EXAMINATION

13   BY MR. PAGLIARO:

14   Q.    This your first time testifying, Mr. Hoffman?

15   A.    Yes, it is.

16   Q.    Just take a deep breath.

17   A.    Thank you.

18   Q.    Okay.  Are you currently employed, Mr. Hoffman?

19   A.    Yes, I am.

20   Q.    And tell us who employs you.

21   A.    I am currently employed with American Pop Corn Company.

22   Q.    And how long has that been, sir?

23   A.    Since July of 1985.

24   Q.    And your title now?

25   A.    I'm vice president of production.

1 Q. And how long have you had that title, Mr. Hoffman?

2 A. Oh, approximately ten years.

3 Q. Now, you make microwave popcorn products at the plant where  
4 you work?

5 A. Yes, sir.

6 Q. Has that been true since you worked there?

7 A. Yes, sir.

8 Q. And how many other products do you make besides microwave  
9 popcorn?

10 A. Well, we have bulk corn, 50-pound bags. We have what we  
11 call our poly division which is your traditional whole kernel in  
12 a plastic bag of one and two --

13 Q. Old-fashioned plastic bag popcorn?

14 A. Old-fashioned pop on the stove 1-, 2-, 4-, 12 1/2-pound  
15 bags. That's really the two other primary operations at our  
16 facility.

17 Q. Fair to say your business is the popcorn business?

18 A. Absolutely.

19 Q. And the percentage of business that's been occupying your  
20 company for a long time is microwave popcorn?

21 A. Popcorn on both ends of the world, yes, the poly as well as  
22 microwave since -- at our facility, the microwave, since 1988.

23 Q. And that's when microwave popcorn became sort of open and  
24 available to the public?

25 A. Correct. Actually it probably started a few years before

1 that, maybe as early as 1984. But we were not actually  
2 producing -- we did not have a packaging microwave facility  
3 until December of 1988.

4 Q. Now, was that in the same building as everything else you  
5 did at APC, American Pop Corn?

6 A. No, sir. It was in a completely separate facility built  
7 specifically for the microwave production.

8 Q. Now, we've heard about the mixing room. Was that, again,  
9 open to the rest of the microwave popcorn area?

10 A. No, sir. That was an isolated room separate from the  
11 production, the warehousing, the labs. It was a separate room  
12 all unto itself.

13 Q. Now, who designed the setup for your company for microwave  
14 popcorn? Do you know?

15 A. There was a group, an engineering group, out of Chicago. I  
16 apologize. The name escapes me right at this moment.

17 Q. Do you need any water?

18 A. No, no, I'm good. I'm good. Thank you.

19 Q. I do. But it's fair to say, isn't it, that the work of  
20 coming up with the design was really something supervised by  
21 American Pop Corn Company?

22 A. Yes. I was keenly aware that there was a lot of give and  
23 take with the concepts and how it was designed. There were a  
24 lot of -- there were a lot of design changes. I was made aware  
25 of that through my direct boss, Larry Bruyer, who was

1 instrumental in putting all this together.

2 Q. When was ventilation first introduced to the microwave  
3 popcorn building, sir?

4 A. Well, ventilation was inherent throughout the facility, you  
5 know, just your general HVAC application certainly in our  
6 production room. Specific ventilation for each area was part of  
7 the original design.

8 Q. And did you have an engineering firm advise American Pop  
9 Corn on that? Do you recall?

10 A. Well, that was also part of the overall engineering plan  
11 that was implemented from the very beginning. And I am aware  
12 there was a local group that actually installed, you know, a lot  
13 of the ventilation process.

14 Q. The employees in that area, who would have hired, trained  
15 those employees?

16 A. Early on the primary connection with the hiring was Larry  
17 Bruyer. He --

18 Q. But he's an employee of your company.

19 A. Actually he was -- he had my position. He was vice  
20 president of production during this time frame, and he and  
21 actually the owners all established how many people would be  
22 necessary down to how many people per line, how many -- how many  
23 warehouse men, how many truck crew members. All of these things  
24 were somewhat laid out as it was getting closer and closer to  
25 the start of the production in the latter part of '88.



1 Q. And the assignment of the workers, where they were at any  
2 given time and how they did their job, how was that done?

3 A. Well, interestingly enough, we -- our poly facility which  
4 is, again, very separate from the microwave facility, we gave a  
5 lot of our tenured employees the option to leave the poly  
6 facility and come down and try the new actually fast and  
7 automated microwave facility to see if that would be something  
8 that would be of interest to them.

9 Q. But the day-to-day assignment of workers and assignment of  
10 work times and duties and all, that was done by management at  
11 American Pop Corn?

12 A. That's correct.

13 Q. Now, do you know Mr. Ron Kuiper, the plaintiff in this  
14 lawsuit?

15 A. Yes, I do.

16 Q. How long have you known Mr. Kuiper?

17 A. Really probably starting in the latter part of '88 when I  
18 started coming into Sioux City. I was at that -- early on in my  
19 tenure, I was the plant manager in Schaller, Iowa, and I was  
20 transferred to Sioux City kind of on a long-term transition  
21 starting in probably September of 1988, and my family and I  
22 moved over in the middle of 1989.

23 Q. And did you meet Mr. Kuiper then?

24 A. Yes. I actually knew him on -- as part of my  
25 responsibilities at that time. I was a member of the field

1 department, and the field department takes ownership for all of  
2 our production fields in a three-state area but also bringing in  
3 the hybrid popcorn as well as storing it, handling it which  
4 included shelling the popcorn. And so I met Mr. Kuiper when he  
5 was still on our shelling crew if you will.

6 Q. And did you observe anything at that time when Mr. Kuiper  
7 was working in the corn shelling area about his physical  
8 condition?

9 A. Ron physically -- appearancewise Ron looked normal, but it  
10 was -- it was -- there were times that he clearly was impacted  
11 by the dust and the chaff that created during the shelling  
12 process.

13 Q. And how did that manifest itself?

14 A. Oftentimes in coughing and wheezing.

15 Q. Did you observe anything else regarding his breath?

16 A. Not specifically, no.

17 Q. And could you tell me what companies supplied butter  
18 flavoring for American Pop Corn Company between 1992 and 1996?

19 A. Between '92 and '96? I'm certainly aware of during that  
20 time frame Tastemaker, Fries & Fries, Givaudan, all one in the  
21 same were certainly a primary supplier. Flavors of North  
22 America came on as a supplier probably in '95, late '95, and  
23 another company by the name of Sensient would have been a  
24 supplier I think in the latter part of '95, '96.

25 Q. Did American Pop Corn Company treat the butter flavors they

1 use differently from each other? In other words, different  
2 companies or different flavors?

3 A. The major difference would be the handling of whether they  
4 were a liquid, a paste, or a powder, but for all intents and  
5 purposes, they were incorporated into the mixing tanks in a  
6 similar fashion.

7 Q. Did American Pop Corn Company purchase or use the chemical  
8 diacetyl?

9 A. Not as a standalone product, no, sir.

10 Q. Now, there's been some testimony about a NIOSH  
11 investigation in the plant, so let me ask you a couple questions  
12 about that.

13 MR. PAGLIARO: Cort, can you put up 3603?

14 Q. You've seen this report, haven't you, Mr. Hoffman?

15 A. Yes, I have.

16 Q. You're quite familiar with it, aren't you, sir?

17 A. That's correct.

18 Q. And this is dated July 2004; is that correct?

19 A. That's correct.

20 MR. PAGLIARO: Look on page 3, 003, Cort.

21 Q. Now, NIOSH came out to your plant before this report was  
22 issued; right?

23 A. Yes. They came out as early as September of 2001.

24 Q. Now, my first question for you has to do with the top of  
25 page 007, very, very top, introduction. Now, this says in July

1 2001, NIOSH received a request for technical assistance from the  
2 Iowa Department of Public Health. Do you see that?

3 A. Yes, I do.

4 Q. To evaluate the risk for lung disease in American Pop Corn  
5 Company workers exposed to butter flavorings. Do you see that?

6 A. Yes, I do.

7 Q. And my question for you, Mr. Hoffman, is did you or anyone  
8 at APC call NIOSH and ask them to come in and look at the plant?

9 A. No, sir.

10 Q. How did they come to be there as far as you know?

11 A. My understanding is that NIOSH as a result of the event  
12 that took place in Jasper, Missouri, put out an appeal to public  
13 Department of Health in any state that had popcorn manufacturing  
14 facilities. At least in our case, the Iowa Department of Health  
15 were the ones that drove the technical assistance request and  
16 asked us if we would entertain the idea of NIOSH coming in and  
17 discussing microwave popcorn production with us at American Pop  
18 Corn Company.

19 Q. Did you have any concerns with that?

20 A. Well, quite frankly, it was at the very beginning of a lot  
21 of the information coming out of Jasper. We didn't, quite  
22 frankly, know very much at all. So we were curious. We were  
23 clearly interested in knowing what NIOSH's concerns were.  
24 Nervous, no, sir. No. We were -- we were very cautious and  
25 wondering what it was all about. But no, we actually welcomed

1   them in on their first request.

2   Q.   And they issued some what they call interim reports to you,  
3   didn't they, Mr. Hoffman?

4   A.   That's correct.

5   Q.   And one of those I think we saw in the context of your  
6   deposition dated 2-28-03.

7               MR. PAGLIARO:  Could you pull that up, Cort?  It's  
8   3557.

9   Q.   Do you recognize that, Mr. Hoffman?

10  A.   Yes, I do.

11  Q.   That was sent to you, wasn't it?

12  A.   That's correct.

13  Q.   And what did you do with these interim reports that you  
14  received from NIOSH?

15  A.   We felt compelled to communicate all information coming out  
16  of NIOSH at all levels of our facility, and so part of our  
17  rationale with that was when NIOSH first came in they arrived in  
18  white suits and with full-face respirators on when they went  
19  into our production room.  So all of our employees were  
20  extraordinarily aware and concerned about what was going on.

21               So the stage had been set for us to communicate all of  
22  these events clearly and precisely to our employees which  
23  involved having group meetings, posting of this information.  
24  Actually Gary and Carlton Smith, the owners of the company,  
25  participated in most of these meetings as well.

1 Q. And was -- this particular letter, for example, was this  
2 posted?

3 A. Yes, sir.

4 Q. And where would it have been posted, Mr. Hoffman?

5 A. We post most of our -- the most important regulatory or  
6 governmental postings right next to our time clocks in full view  
7 for our employees to see. In this case there were several  
8 pages, and there's actually a window in our hallway that you can  
9 actually view the production area right through the window as  
10 you swipe your timecard. We literally taped this letter to that  
11 glass window or this Plexiglas window.

12 Q. As part of this process, did you also, Mr. Hoffman, consult  
13 with a pulmonologist?

14 A. Chronologically I'm not exactly sure when, but yes, we did.

15 MR. PAGLIARO: Cort, would you throw up 3731, 0068?

16 A. I would take you up on some water if that's okay.

17 Q. Sure.

18 A. Thanks.

19 THE COURT: Nick, could you get the witness a glass of  
20 water?

21 MR. MCCLAIN: We've got one.

22 THE COURT: Thanks.

23 THE WITNESS: Very good. Thank you.

24 BY MR. PAGLIARO:

25 Q. This letter, was that a letter that you recognized,

1 Mr. Hoffman?

2 A. Yes.

3 Q. Was that letter sent by you to a doctor?

4 A. That's correct.

5 Q. And who is the doctor that was selected?

6 A. Dr. Craig Bainbridge.

7 Q. Now, this letter is dated Tuesday, November 20, 2001; is  
8 that correct?

9 A. That's correct.

10 Q. Now, is that before or after NIOSH contacted you?

11 A. It was after NIOSH contacted us.

12 Q. And why did you retain Dr. Bainbridge?

13 A. He was actually a personal physician of Wrede Smith who was  
14 our president at that time. And he was -- he is a local  
15 pulmonologist of high regard, and we thought it would be  
16 important to consult and to have a local expert to give us some  
17 direction and some guidance as we worked our way through all of  
18 this -- all these concerns that had brought forth -- been  
19 brought forth by NIOSH.

20 Q. And one of the questions you asked Dr. Bainbridge, is this  
21 minor ingredient, diacetyl, in our flavor mixture capable of  
22 causing harm, do you see that?

23 A. Yes, I do.

24 Q. Did Dr. Bainbridge respond to your letter?

25 A. He did. He took it under advisement. He wasn't aware of

1 any of the bronchiolitis obliterans issues that had just taken  
2 place in Missouri, and he promised both Wrede and I that he  
3 would talk to his colleagues and get up to speed on this issue.

4 Q. And did he do that?

5 A. Yes, he did.

6 MR. PAGLIARO: Could you put up 3731, 0069, please?

7 Q. And later on did Dr. Bainbridge send you a letter,  
8 Mr. Hoffman?

9 A. Yes, he did.

10 Q. And did -- what did he send you with that letter of March  
11 the 28th, 2002?

12 A. I believe it was like a trade journal, but I can't -- a  
13 medical trade journal, but I can't say exactly what it was, but  
14 I do remember seeing kind of a summary of what had been going on  
15 in our industry and reference bronchiolitis obliterans.

16 Q. And that came in March of 2002 according to this letter?

17 A. Yes.

18 Q. Now, NIOSH came out to the plant, and they took some air  
19 measurements; is that true?

20 A. That's correct.

21 Q. Did they also look at the employees?

22 A. Yes, they did.

23 Q. What did they do with the employees? Do you recall?

24 A. In the first round, they put on personal air monitors for  
25 lack of a better explanation where they would literally put



1   them -- a device that would literally capture the air that would  
2   be in the breathing zone or at least approximate the breathing  
3   zone, and in many cases a variety of different jobs in our  
4   production area, mixing area, warehousing area, lab, all wore  
5   these for approximately eight hours.

6   Q.   What did they do with regard -- did they do any medical  
7   testing or breathing testing that you recall?

8   A.   Not the first round. That came later.

9   Q.   Okay. And what did they do in the second round?

10   A.   In the second round they requested that they do pulmonary  
11   function tests literally for everyone at our facility.

12   Q.   You included?

13   A.   Absolutely.

14   Q.   Okay. And did they issue letters to people after the  
15   pulmonary function tests came out?

16   A.   Yes, they did.

17               MR. PAGLIARO: Now, let's go back to the final report  
18   if we can, 3603. Can we go to 003?

19   Q.   Now, NIOSH issued this report, and they had some  
20   recommendations for employees and some recommendations for  
21   managers; isn't that right?

22   A.   That's correct.

23   Q.   And one of the sections says what managers can do. Do you  
24   see that?

25   A.   Yes, I do.

1 Q. And you can look right on your screen there if you look in  
2 front of you.

3 A. Well, I'll be honest with you. I can't see it.

4 Q. It's easier, huh?

5 A. Thank you.

6 Q. That's okay.

7 A. Yes, what managers can do.

8 Q. Was that directed to you, to the people at APC?

9 A. Yes.

10 Q. Okay. And why don't you explain to the jury some of the  
11 things they asked you to do. One of the things says identify  
12 engineering solutions. What did you take that to mean, sir?

13 A. One of the challenges inherent with mixing butter flavors  
14 or any flavors for that matter is the capturing the essence of  
15 the flavor in the blend. So the recipe has to be kept very  
16 precise in its measurements. It requires a protocol as how  
17 the -- how the recipe is added to -- in this case it was soybean  
18 oil, how the salt was put in, how everything was blended.

19 First starting out, most of the mixing tanks were  
20 open-top tanks. They required a lid to be opened for a lot of  
21 the flavors to be put into. There was significant discussion,  
22 especially after the second visit from NIOSH, about better ways  
23 to possibly incorporate those flavors, those recipes, if you  
24 will, into the oil. And part of the engineering challenge  
25 behind that was to come up with different methods seeking out

1 what currently was available.

2 We looked at -- maybe some of you are familiar with  
3 lock-and-load like you might see on a back of a planter. Maybe  
4 try to incorporate the recipes in a more contained environment.  
5 Vacuum systems were certainly -- one of the terms coming out of  
6 a lot of this research was a closed system. So there were  
7 engineering -- NIOSH always pushed engineering as one of your  
8 first lines of defense rather than relying on other methods to  
9 control the environment that you were working in.

10 Q. And that's the OSHA rule too, isn't it, Mr. Hoffman, that  
11 you try to control the work environment through engineering  
12 rather than rely on respirators completely?

13 A. Absolutely. OSHA in my understanding makes it -- it really  
14 implements the findings that come out of a lot of the scientific  
15 studies done by NIOSH.

16 Q. You had a respirator -- I'm sorry.

17 A. No, no, that's fine.

18 Q. I thought you were finished. You had a respirator program  
19 for the mixing room at your plant, did you not, between '92 and  
20 '96?

21 A. Yes, we did.

22 Q. And what was your understanding of the respirator policy in  
23 effect for mixers during that period of time in the plant?

24 A. Anyone entering into the mixing room were asked and  
25 required to wear a full-faced respirator while the mixing

1 process was going on.

2 Q. And you reported that to the federal government, didn't  
3 you?

4 A. Yes.

5 MR. PAGLIARO: Would you put up 3603, 004?

6 Q. Is it true that your report as it says here --

7 MR. PAGLIARO: Go down to the company reported, second  
8 full paragraph.

9 Q. It says the company reported that workers who handled  
10 flavorings had used full-facepiece respirators with particulate  
11 filters and organic vapor cartridges since shortly after the  
12 microwave popcorn plant began operating in December of '88. Was  
13 that what you reported to the government?

14 A. That is correct.

15 Q. And was that your understanding of the policy?

16 A. That's my understanding.

17 Q. And NIOSH came out, and they looked at your ventilation and  
18 your exhaust, didn't they, Mr. --

19 A. Yes, they did.

20 Q. And did they find any fault with your exhaust systems?

21 A. No, no. Actually they were impressed by its isolation and  
22 impressed by the fact that we had ventilation coming off of each  
23 one of the individual tanks, mixing tanks.

24 Q. And how long had that been in effect?

25 A. We started putting -- we were pulling the head space off of

1 the tanks as early as 1991, late 1990, '91, right in there.

2 Q. So is that in effect -- that head space over the tanks and  
3 that local exhaust, was that in effect in the period between '92  
4 and '96?

5 A. Yes.

6 Q. Now, was NIOSH -- at the end of this process, were they  
7 critical of what you were doing in the workplace?

8 A. No, just the opposite. They were very complimentary. You  
9 know, in their experience what they had seen in other microwave  
10 manufacturing facilities -- and I certainly can't tell you which  
11 ones they are -- but Dr. Kanwal and Dr. Kullman were very  
12 impressed by many of the practices and protocols that we had in  
13 place.

14 Q. Now, there's been some mention of Mr. Kuiper training the  
15 next person who took over the mixing function after he left the  
16 mixing room, just tell you that. Was Mr. Kuiper -- did he need  
17 to be present in the mixing room to do the training?

18 A. No, sir.

19 Q. Why is that?

20 A. Well, it's an isolated room, but it also has glass windows  
21 going into the mixing room itself. There's several ways it  
22 could be done without him entering into the room, and our  
23 efforts were to keep him out of the room. So he could -- he  
24 could direct the trainee, if you will, either by hand motions or  
25 by having the individual come out into the hallway outside of

1 the mixing room, draw him a map, if you will, but most of it was  
2 done -- was done orally and/or on a dry run when there was no  
3 mixing going on in the room.

4 Q. You said there was an effort to keep Mr. Kuiper out of the  
5 mixing room. Why is that, Mr. Hoffman?

6 A. In order for us to keep our respirator policy intact, we --  
7 anyone that was wearing a mask at American Pop Corn Company,  
8 whether it be anyone working in any of our corn receiving area,  
9 in any of our production areas, we were all required to do fit  
10 testing. And then the full-face respirators required a certain  
11 level of respiratory function in order to qualify to wear a  
12 respirator in the mixing room. Mr. Kuiper, his PFT was not high  
13 enough to qualify, if you will, to wear a respirator at that  
14 time.

15 Q. Okay.

16 MR. PAGLIARO: I have no further questions, Your  
17 Honor. Thank you.

18 Thank you, Mr. Hoffman.

19 THE COURT: Thank you. Why don't we take a stretch  
20 break. Then we'll hear from Mr. McClain.

21 Thank you. Please be seated.

22 Mr. McClain?

23 CROSS-EXAMINATION

24 BY MR. MCCLAIN:

25 Q. Still morning, Mr. Hoffman, so good morning.

1 A. Good morning, sir.

2 Q. Mr. Hoffman, did you know that Givaudan is blaming American  
3 Pop Corn for whatever injury occurred to Ron Kuiper in this  
4 case?

5 MR. PAGLIARO: Objection, Your Honor. No foundation.

6 MR. MCCLAIN: Well, let me --

7 THE COURT: Objection's overruled.

8 BY MR. MCCLAIN:

9 Q. Did you know that?

10 A. No, sir.

11 Q. Well, I want to show you an instruction that is on one of  
12 Givaudan's defenses, the sophisticated user defense it's  
13 so-called. It says that --

14 MR. MCCLAIN: No, go up to the top, Scott, would you?

15 Q. It says Givaudan's third defense to the Kuipers' claim is  
16 that Ronald Kuiper's employer, American Pop Corn Company, was a,  
17 quote, unquote, sophisticated user of butter flavor and,  
18 therefore, was responsible for providing warnings about the safe  
19 usage of such products to its employees such as Ron Kuiper.

20 And then it says, one -- to prove this defense, it  
21 lays out the elements. And it says the first thing is, one,  
22 American Pop Corn Company knew or should have known of the  
23 potential dangers of butter flavors containing diacetyl.

24 Now, Mr. Hoffman, did the American Pop Corn Company in  
25 the time that Ron Kuiper was a mixer know about the hazards of

1 diacetyl in the butter flavor?

2 A. No, sir.

3 Q. Is that a completely false statement that you knew about  
4 the hazards of butter flavor?

5 MR. PAGLIARO: Objection, Your Honor. That's in an  
6 instruction. It's not a statement.

7 THE COURT: Overruled.

8 A. Would you please repeat the question? I'm sorry.

9 Q. Was it true that you knew the hazards of butter flavor when  
10 Ron Kuiper was working in the mixing room?

11 A. Butter flavor or diacetyl?

12 Q. Well, both, I mean, butter flavor containing diacetyl.

13 A. Not all aspects of it, no, sir.

14 Q. I mean, in other words, did you know it would cause  
15 permanent lung injury to people working around it?

16 A. No.

17 Q. I mean, would you have ever subjected Ron Kuiper to that  
18 kind of hazard if you had known about it?

19 A. No, sir.

20 Q. Would you have ever risked your employees' health working  
21 around butter flavor if you'd known of the dangers?

22 A. No, sir.

23 Q. Before we get into other aspects of your relationship with  
24 Fries & Fries, let me just ask you, Fries & Fries, Tastemaker,  
25 Givaudan, did Givaudan ever warn you about the hazards of



1 working around butter flavor even through the current day?

2 A. Not that I'm aware of.

3 Q. Yeah. We looked at a 2003 material safety data sheet, and  
4 I can show you even later ones. They said that there was no  
5 health hazard and that there was no inhalation risk. Is that  
6 what your recollection is of what Givaudan always told you?

7 A. That's correct.

8 Q. Now, you mentioned that Givaudan was your major supplier  
9 when Ron was in the mixing room; is that right?

10 A. That's correct.

11 Q. In fact, there are invoices of thousands of pounds from '93  
12 on; isn't that right?

13 A. Yes.

14 Q. And then there's an anomaly. In '92 there's no invoices  
15 for sales of butter flavor at all to the Sioux City plant;  
16 right?

17 A. That's correct. The invoices were billed certainly to  
18 American Pop Corn Company in Sioux City, but the delivery point  
19 was not Sioux City.

20 Q. All right. And the delivery point was Chicago.

21 A. That's correct.

22 Q. All right. Back in those days you had a co-packing  
23 relationship with a company called Olmarc; is that right?

24 A. That's correct.

25 Q. And so the butter flavor from Givaudan would be delivered

1 to Chicago, and then it would be transported to Sioux City from  
2 there.

3 A. That's the most reasonable explanation that we've come up  
4 with. It is an anomaly because in '91 and '93 Givaudan's  
5 products were shipped directly to American Pop Corn in Sioux  
6 City.

7 Q. Well, in fact, there's some evidence of that to support  
8 your recollection. 1905, Dale's visit to Fries & Fries at  
9 Cincinnati. We showed this yesterday. That's Dale Hartshorn.  
10 He's someone that works with you?

11 A. That's correct.

12 Q. It's -- in this '92 memo that you'll see on your screen, it  
13 says, "The only real negative during my visit was the discovery  
14 of several pails of our flavor in their cooler when I thought we  
15 had shipped all of our flavor into Chicago." So that supports  
16 your recollection of where it was being shipped in 1992.

17 A. Very good.

18 Q. Okay?

19 A. Yes.

20 Q. So does that help you out?

21 A. Yes.

22 Q. And likewise in '93, Exhibit 2210 --

23 MR. MCCLAIN: Your Honor, this was not on your exhibit  
24 list. It's a new exhibit.

25 THE COURT: Well, before you show it to the jury --

1 MR. MCCLAIN: I'm showing it to Mr. Pagliaro before we  
2 put it up.

3 THE COURT: Mr. Pagliaro, any objection to it?

4 MR. PAGLIARO: I don't, Your Honor.

5 MR. MCCLAIN: We read it yesterday, Your Honor. It's  
6 already been admitted.

7 THE COURT: Oh, okay.

8 MR. MCCLAIN: Go ahead and put that up.

9 BY MR. MCCLAIN:

10 Q. This is on your letterhead. American Pop Corn, 1993, to  
11 John Boyd, Olmarc Packing Company, Dear John. Again,  
12 emphasizing that to store the materials in a cool place when  
13 possible and make sure you keep them dry. And then over on to  
14 the next page you say, "Our need for cold storage has been  
15 greatly reduced. The only two flavors that require cold storage  
16 are natural and natural light flavors. We don't pack any great  
17 quantity of these flavors. As a result of the reduced need for  
18 cold storage, we are no longer storing flavors at New Horizon  
19 warehouse in Itasca." That's Chicago; right?

20 A. Correct.

21 Q. All flavor storage will be at Sioux City, Iowa. When you  
22 pack for us, we will send the flavors to you on a truck with the  
23 popcorn; right?

24 A. That's how it reads, yes.

25 Q. Okay. So emphasizing that '92 shipments were to Chicago,

1 but in '93 on, the shipments were here to Sioux City; right?

2 A. Yes.

3 Q. And we have some documents just documenting the amount of  
4 popcorn shipped to Chicago. 1885 is a document from -- in  
5 evidence, a thousand pounds' flavor for popcorn, shipped to  
6 Olmarc Packaging that was sold to you by Fries & Fries, again,  
7 documenting as early as '85 that's where you were having it  
8 delivered; right?

9 A. In '85 Olmarc was packing for us. We were not packing in  
10 Sioux City at all.

11 Q. So -- but establishing when the relationship started,  
12 that's where the process of working with Olmarc began; right?

13 A. Yes.

14 Q. And then we have 2214.

15 MR. MCCLAIN: Is this in evidence? Let me show it to  
16 Mr. Pagliaro first. Any objection?

17 MR. PAGLIARO: I have no objection.

18 MR. MCCLAIN: 2214, Your Honor, are a series of  
19 invoices that we're offering into evidence at this time.

20 \* \* \* \*

21 (Exhibit 2214 was offered.)

22 \* \* \* \*

23 THE COURT: Thank you. No objection?

24 MR. PAGLIARO: I have no objection, Your Honor.

25 THE COURT: It's received.

\* \* \* \*

(Exhibit 2214 was admitted.)

\* \* \* \*

BY MR. MCCLAIN:

Q. And these are the shipments to Fries & Fries but delivered to the New Horizon warehouse in 1992 from Givaudan. And that would be consistent with your recollection?

A. Yes, sir.

Q. And then there's a summary document which summarizes those from two thousand -- or 2212 is the summary document which shows in '92.

MR. MCCLAIN: 2212, Your Honor, I'm not sure whether it's in or out, but Mr. Pagliaro has no objection.

THE COURT: Okay.

BY MR. MCCLAIN:

Q. 2212 shows that in 1992, the first full year that Ron was in the mixing room, the overwhelming quantity of materials used were Fries & Fries or Tastemaker, Givaudan. Is that consistent with your recollection?

A. Yes, it is.

Q. And likewise, this is our stipulation number 25.

MR. MCCLAIN: Your Honor, after '93, this is the amount that is stipulated that went directly to Sioux City from Givaudan.

Q. Roughly 50,000 pounds every year, a little more than that.

1 That was the bulk of the butter flavor you were buying.

2 A. I can't -- I've never seen this document. I can't speak  
3 that this is a summary document of all the butter flavor that we  
4 produced coming into Sioux City, no.

5 Q. Well, this -- they have stipulated that that's the butter  
6 flavor they sold. I'll show you another document, 2213, which  
7 is --

8 MR. MCCLAIN: No objection to that, Your Honor.

9 Q. 2213 is the summary document which shows that in the  
10 year -- in the years two thousand -- 1993 through 1995, that the  
11 majority of product was Fries & Fries.

12 MR. MCCLAIN: Go on, Scott, to '93 on.

13 Q. With a small quantity in '94 of Flavors of North America,  
14 105 pounds, and in '94, 245 pounds of Flavors of North America.  
15 Does that refresh your recollection that the overwhelming amount  
16 of butter flavor through '94 was Tastemaker?

17 A. Yes, I'll agree with that.

18 Q. Okay. Now, I just wanted to clarify all that so that we  
19 know that you had a very strong relationship with Givaudan,  
20 Tastemaker. You were in constant communication with them. Did  
21 you ever hear from Givaudan in those years when they were  
22 selling you so much butter flavor that workers in their own  
23 plant were being diagnosed with bronchiolitis obliterans?

24 A. No, sir.

25 Q. Did you know that from 1995 -- 1985 they knew that

1 breathing diacetyl was harmful?

2 A. No, sir.

3 Q. Or it would cause systemic toxicity.

4 A. No, sir.

5 MR. MCCLAIN: Would you put that FFIDS up, Scott, so I  
6 can be sure that Mr. Hoffman's never seen anything like this  
7 from Givaudan?

8 Q. You can see here this relates to diacetyl.

9 MR. MCCLAIN: Would you go over to that hazards  
10 section?

11 Q. Did Givaudan in any of this time period or even through  
12 today, did they -- have they ever told you that by inhalation  
13 diacetyl is harmful and that it's capable of producing systemic  
14 toxicity? Did you ever have any indication from them about  
15 these facts, Mr. Hoffman?

16 A. No, sir.

17 Q. Is that something you would have liked to have known?

18 A. Yes.

19 Q. Do you know or did you have any indication in 1991 that  
20 Givaudan was warned by its supplier of diacetyl that you had to  
21 use air-supplied respirators?

22 A. No.

23 Q. These little cartridge deals that you had the guys wearing  
24 in the mixing room were not to protect against the breathing  
25 vapors of diacetyl, were they? They were organic cartridges.

1 A. Organic and particulate cartridges.

2 Q. Right. Now you've got your workers in scuba gear  
3 essentially; right?

4 A. Supplied air, yes.

5 MR. MCCLAIN: Scott, will you show that clip? Has  
6 Mr. Pagliaro seen this? Well, hang on for a minute because I  
7 want -- is there a way to show him first?

8 THE COURT: Yeah, there is.

9 MR. MCCLAIN: Okay. Go ahead and show Mr. Pagliaro  
10 that and make sure that . . .

11 What's the exhibit number for this? 2141. Mr. --

12 THE COURT: Well, what'd you all decide?

13 MR. MCCLAIN: There's no objection to it.

14 THE COURT: Okay.

15 MR. PAGLIARO: As long as the witness --

16 THE COURT: We're going -- I'm sorry.

17 MR. PAGLIARO: I'm sorry.

18 THE COURT: It's going to be used as a demonstrative  
19 exhibit.

20 MR. MCCLAIN: Sure, it is.

21 THE COURT: Okay.

22 MR. PAGLIARO: As long as the witness can ident --  
23 excuse me, authenticate it, Your Honor.

24 THE COURT: Well --

25 MR. MCCLAIN: Let me just ask.



1 THE COURT: I don't know what you mean by authenticate  
2 as long as he says it's -- he can -- no. It's not -- he doesn't  
3 have to authenticate it.

4 MR. MCCLAIN: It's him in the video, Your Honor.

5 THE COURT: That's a different issue.

6 MR. MCCLAIN: It's the witness in the video.

7 THE COURT: Well, okay. But all he has to do is be  
8 able to say what similarities, if any, it has to the closed air  
9 system so . . .

10 MR. PAGLIARO: And I apologize. I used the wrong  
11 word.

12 THE COURT: That's okay.

13 (Video was played in open court.)

14 MR. MCCLAIN: Turn the volume down. I don't want the  
15 volume playing on that.

16 (Continuation of video.)

17 BY MR. MCCLAIN:

18 Q. Mr. Hoffman, are you familiar with this video?

19 A. Yes, I am.

20 Q. Okay. You were involved in its creation?

21 A. That's correct.

22 MR. MCCLAIN: Now, I just want to back up, Scott,  
23 without the audio. Stop it right there, Scott. Can you pause  
24 it?

25 Q. What's being depicted there, can you describe that in terms

1 of personal protective equipment?

2 A. Correct. The gentleman that's entering into the -- and I  
3 must say it was a temporary mixing area because we were in the  
4 process of building an additional mixing room. It's what is  
5 called a supplied-air respirator system.

6 MR. MCCLAIN: Go ahead and play the rest of the tape,  
7 Scott, so we can see more of that.

8 (Continuation of video.)

9 Q. Is that a better view of it right there?

10 A. Correct.

11 Q. Okay. And that's designed to protect workers from exposure  
12 to vapors like from diacetyl; is that right?

13 A. Correct.

14 Q. That's not what they were wearing back in '92 to '95, is  
15 it?

16 A. No, sir.

17 Q. Now -- but here's the question.

18 MR. MCCLAIN: Scott, would you go to 2172 Berje  
19 material safety data sheet? This is in evidence.

20 Q. One of their suppliers was recommending back in '91 use  
21 positive pressure self-containing breathing apparatus. That's  
22 what you're using now, isn't it?

23 A. A form of, yes, sir.

24 Q. And if anybody had told you back in '91 to use this kind of  
25 breathing apparatus, you would have used it to protect your

1 workers; isn't that right?

2 A. Yes, we would have.

3 Q. Absolutely. No question.

4 A. That's correct. We would have used it.

5 Q. Now, did you have any sense back during this entire time  
6 period that this was going on that Givaudan was looking into  
7 this and had a team of doctors working on it and were examining  
8 the effect that diacetyl had upon workers?

9 A. Can you give me a time frame?

10 Q. '92 to '95.

11 A. No, I was not aware of that.

12 Q. Would you have liked to have known that?

13 A. Yes, sir.

14 Q. And if they had told you there was any question about this  
15 material, would you have taken precautions for your workers?

16 A. We would have taken appropriate precautions, yes.

17 Q. In other words, if they'd told you that this is possible,  
18 it's not been proven, but it's possible, would you have taken  
19 the precautions to protect your workers?

20 A. If it was possible that it could cause worker injury,  
21 absolutely. We would have taken additional precautions.

22 Q. I mean, from your standpoint, is there anything more  
23 important than the health of your employees, Mr. Hoffman?

24 A. No, sir.

25 Q. I mean, you've lost a lot of sleep over this issue, haven't

1     you?

2     A.     Yes, you could say that.

3     Q.     And you've worried about Ron Kuiper since he's been  
4     diagnosed.

5     A.     Has he been diagnosed with bronchiolitis obliterans?

6     Q.     Yes, sir.

7     A.     I've been worried about Ron Kuiper for a long time, but I  
8     was not aware that he had been diagnosed.

9     Q.     He's been out of the plant for some time.

10    A.     Yes, he has.

11    Q.     And -- but you're still concerned about him even though  
12    he's been out of the plant.

13    A.     Absolutely.

14                 MR. MCCLAIN:   Thank you, Mr. Hoffman.   No further  
15    questions.

16                 THE COURT:   Any redirect?

17                 MR. PAGLIARO:   I have a couple questions.

18                 THE COURT:   Yes.   Thank you.

19                 MR. PAGLIARO:   Just a few.

20                                 REDIRECT EXAMINATION

21    BY MR. PAGLIARO:

22    Q.     Now, Mr. Hoffman, from the late 1980s, the workers in the  
23    mixing room were assigned to and were required to wear  
24    respirators.   You testified to that?

25    A.     That's correct.

1 Q. And the government described those respirators, and as you  
2 described them, they were not only for particulates, were they,  
3 Mr. Hoffman?

4 A. Certainly not. They were -- they were the best protection  
5 that we were aware of in terms of the organic filters at that  
6 time.

7 Q. So they had organic vapor cartridges on them as well?

8 A. Yes, they did.

9 Q. Okay. And you instituted that policy because of something  
10 that happened; isn't that correct?

11 A. That's correct.

12 Q. And what happened in the late '80s that caused you to  
13 institute that policy of wearing respirators in the mixing room?

14 A. Early on in our mixing experience, actually in -- from my  
15 understanding in 1989 we had an incident in our mixing room that  
16 we inadvertently got some water mixed in with our oil in the  
17 tank. Keep in mind that salt is a -- one of the primary  
18 ingredients that go in with the other ingredients, starch, a  
19 variety of different things. And water and salt and certainly  
20 starch are not very compatible.

21 And we got a bunch of lumps, if you will, clumps of  
22 salt and starch showing up in our mixing tank, plugging our  
23 filters. We -- if you could envision stainless steel supply  
24 lines almost like a dairy running out over the top of our  
25 different filler machines were not making the return trip

1 because they were plugging up in the filter system.

2 So we had a batch of oil, a batch of butter flavor  
3 that was -- we had to make a decision on how we were going to  
4 deal with it. So we decided to recruit two or three people to  
5 come in and literally dip out on the top of the tank with little  
6 fish nets or whatever spoons we had available to take out these  
7 lumps and clumps.

8 Q. And what happened to some of those employees, Mr. Hoffman?

9 A. Towards the end of the batch later in the day they were  
10 starting to experience blurred vision and a scratchy almost like  
11 a welding burn type of response.

12 Q. And the company investigated that with one of the flavor  
13 companies, didn't they?

14 A. Through a series of things, Dale Hartshorn took it upon  
15 himself to figure out what was the root cause of that, and he  
16 finally found an answer from one of the flavor companies, that's  
17 correct.

18 Q. And what was the cause of that irritation?

19 A. Dale Hartshorn reported that it was caused by diacetyl.

20 Q. So the company knew that the diacetyl was an irritant?

21 A. We certainly knew at that point in time that the volatiles  
22 coming off of the butter flavor could cause eye burn, that's  
23 correct.

24 Q. And what did you do as a result of that, Mr. Hoffman?

25 A. That's what -- that's what drove our reaction to put on --

1 at first we tried goggles and decided very quickly that that  
2 wasn't appropriate. And then we went to the full-faced  
3 respirator, dual cartridge respirator protector -- respiratory  
4 protection, sorry.

5 Q. And after that, did you do any independent investigation  
6 about diacetyl?

7 A. Personally, no, sir.

8 Q. The company?

9 A. Only in the context of its role in the recipe but certainly  
10 did not feel compelled nor driven to research it in terms of  
11 other potential injuries.

12 Q. And you weren't buying diacetyl, pure diacetyl, from  
13 Givaudan or Flavors of North America or any other flavoring  
14 company, were you?

15 A. No, absolutely not. It was always delivered as part of  
16 a -- you know, in some form or another. It was either in a dry  
17 encapsulated form, it was in a paste form, or it was in a liquid  
18 form, but it was never straight pure diacetyl.

19 MR. PAGLIARO: Okay. I have no further questions,  
20 Your Honor. Thank you very much.

21 Thank you, Mr. Hoffman.

22 THE COURT: You may step down. Thank you.

23 THE WITNESS: Thank you.

24 THE COURT: We're going to take our recess now. We'll  
25 be in recess -- I have a couple matters I need to take up with

1 the lawyers, so we'll be in recess until 12:35. Thank you.

2 (The jury exited the courtroom.)

3 THE COURT: Okay. Please be seated. Now, we need to  
4 take up this matter that we had at sidebar. And what opinions  
5 do the -- how many videotapes are we talking about, and whose  
6 are they? Mr. Pagliaro, do you know?

7 MR. PAGLIARO: Yes, Your Honor. I'm sorry. There are  
8 two, Your Honor.

9 THE COURT: Of who?

10 MR. MCCLAIN: Bacon and Oggel.

11 MR. PAGLIARO: Dr. Bacon, a pulmonologist, and  
12 Dr. Oggel who is the allergist.

13 THE COURT: Oggel.

14 MR. PAGLIARO: I think Dr. Farrell referred to both of  
15 them, Your Honor.

16 THE COURT: Yes. Ross Bacon and Oggel. Now --

17 MR. PAGLIARO: And they saw -- excuse me.

18 THE COURT: No, that's okay.

19 MR. PAGLIARO: Just to give you a context, they saw  
20 Mr. Kuiper before Dr. Bainbridge did. They were seen by him in  
21 the course of --

22 THE COURT: Right, and they were truly treating  
23 physicians.

24 MR. PAGLIARO: Completely treating physicians as far  
25 as I know.



1           THE COURT: Now, are they giving their opinions -- are  
2 they giving their opinions about diagnosis they reached in the  
3 course of their treatment?

4           MR. PAGLIARO: I believe that to be the case, Your  
5 Honor, yes.

6           THE COURT: Are they giving any opinions on causation?

7           MR. PAGLIARO: Excuse me, Your Honor, just to make  
8 sure. I don't believe there are causation opinions in those,  
9 Your Honor. I really don't. I don't believe that. I could  
10 check and look through the transcripts carefully, but I don't  
11 think -- it's more what they saw with Mr. Kuiper and what they  
12 treated, I believe. If I'm wrong, they can tell me, but I don't  
13 believe that.

14          THE COURT: Okay. We'll find out as soon as he's --  
15 now, are -- what opinions are you objecting to?

16          MR. MCCLAIN: Oggel's treatment was to see --

17          THE COURT: Oggel.

18          MR. MCCLAIN: Oggel? Oggel's treatment was to see if  
19 he had any allergies, and he didn't. So whatever his opinions  
20 are weren't related to his treatment. So we object to that  
21 opinion because --

22          THE COURT: Well, what opinion does he give?

23          MR. MCCLAIN: That he's got asthma.

24          THE COURT: But does he give any opinion on what  
25 caused the asthma?

1           MR. MCCLAIN: He says it's unknown. I think both of  
2 them do, don't they? Is that what they both have said? So yes,  
3 they give a cause: unknown.

4           MR. PAGLIARO: Well, Your Honor, typically treating  
5 physicians don't -- aren't asked to identify causes, Your Honor.  
6 They're there -- you go to your treating physician typically to  
7 get treatment and to get a diagnosis and to get medication.

8           THE COURT: Yeah, but -- no, I understand that. But  
9 then when the lawyers get involved and start taking their  
10 deposition, then it can broaden the scope. Catch my drift?

11          MR. PAGLIARO: Oh, I take your word, Your Honor.

12          THE COURT: Yeah. But I've been spending most of the  
13 last -- well, since it came up at sidebar researching it.

14          MR. PAGLIARO: Yes.

15          THE COURT: And there seems to be somewhat of a bright  
16 line both in Iowa law if that's what I'm supposed to apply or  
17 federal law if that's what I'm supposed to apply, but they seem  
18 fairly consistent. And here's what the cases say. If it's a  
19 treating physician, they can give their opinion as to medical  
20 conditions that they've observed based on their treatment as  
21 almost like lay witnesses can.

22          MR. PAGLIARO: Yes, Your Honor.

23          THE COURT: It's not subject to a higher standard. If  
24 they give a causation opinion, then it's subject to a reasonable  
25 degree of medical certainty and also subject to a Daubert kind

1 of gatekeeping function that I have to perform.

2 So what I understand the representations to be is  
3 they're going to testify about their treatment, and those  
4 opinions do not have to be to a reasonable degree of medical  
5 certainty under Iowa law, Eighth Circuit law, Eleventh Circuit  
6 law. That's all I've found so far. I haven't gone beyond that.  
7 I've been limited somewhat in the time frame.

8 MR. PAGLIARO: Pretty impressive, Your Honor, for that  
9 period of time.

10 THE COURT: Well, Westlaw is, you know, pretty  
11 terrific so . . .

12 MR. PAGLIARO: Let me just, Your Honor --

13 MR. MCCLAIN: Then, Judge --

14 THE COURT: Yes. Oh, Mr. Pagliaro was speaking first.

15 MR. PAGLIARO: If I could, Your Honor.

16 THE COURT: Yes.

17 MR. PAGLIARO: Let me just -- I'll pore through that  
18 transcript one more time, just make sure there's no reference.  
19 I don't believe that's why they were called. They were  
20 called -- just as typical in Pennsylvania, it would be treating  
21 physician depositions, what did you do, what did you see, what  
22 did you treat, you know, what's your diagnosis, and what were  
23 you treating in the process of diagnosis.

24 THE COURT: And if they gave -- let me ask you this.  
25 Let's suppose that it's as you speculate it might be. They give

1 an opinion that he's got COPD, etiology unknown. What's  
2 prejudicial about that even if it doesn't meet the "to a  
3 reasonable degree of medical certainty"? Is that prejudicial in  
4 any way?

5 MR. MCCLAIN: Not really.

6 THE COURT: Because it's a little bit late to be  
7 making them redact it when you've known about this issue for a  
8 long time and you raise it this late. In an ideal world, it  
9 might have been raised earlier. And to the extent that they  
10 gave a causation opinion which is really a negative one -- we  
11 don't know what the cause of the condition is -- I'd probably  
12 have them redact it. But it's not practical to do a redaction  
13 at this late date. And so . . .

14 MR. MCCLAIN: I mean, I --

15 THE COURT: Are they giving any opinions on causations  
16 from butter flavorings?

17 MR. MCCLAIN: No, none.

18 MR. PAGLIARO: No.

19 MR. MCCLAIN: But just for your reference, it's not  
20 hard to redact it at this point. You can do it pretty quickly  
21 within like five minutes, but that's irrelevant to the question.  
22 I mean, I can understand the Court's ruling, and that's fine  
23 with me or the Court's --

24 THE COURT: You're right. I'm not up on current  
25 redaction technology. I plead guilty to that one.

1 MR. MCCLAIN: But I know you're interested in this  
2 issue.

3 THE COURT: Yes.

4 MR. MCCLAIN: So I'm telling you you can redact  
5 things -- if you ever want somebody to cut something out of a  
6 video, if you take a five-minute break and somebody's skilled,  
7 they can take most anything you want out.

8 THE COURT: But are you going to be showing the videos  
9 right away after the break?

10 MR. PAGLIARO: That was the plan if it met Your  
11 Honor's test.

12 THE COURT: Yes. Well, I'm not going to make them  
13 redact it because I don't see any potential -- you know, if they  
14 were asking about that it was caused by the butter flavoring or  
15 something like that, I'd have them redact it and we'd -- but  
16 that's my ruling, and I'm sticking to it; okay?

17 MR. PAGLIARO: And we'll take a close look at it  
18 during the break to make sure.

19 THE COURT: Okay. Thank you.

20 MR. PAGLIARO: Thank you, Your Honor.

21 THE COURT: We'll see you back here at 10:35. Thanks.

22 MR. PAGLIARO: I'm sorry. What time did you say?

23 THE COURT: I'm sorry. 10 -- I said the wrong time.  
24 12:35.

25 (Recess at 12:10 p.m.)

1 THE COURT: Ready for the jury?

2 MR. PAGLIARO: I just had one thing to report.

3 THE COURT: Sure.

4 MR. PAGLIARO: Because I said I would look over the  
5 transcripts again, Your Honor. I just --

6 THE COURT: Okay. Why doesn't everybody be seated.

7 MR. PAGLIARO: It's a small thing, but I just wanted  
8 to be up front.

9 THE COURT: Sure.

10 MR. PAGLIARO: Question was asked -- this will take  
11 two seconds. Dr. Bacon, not Oggel. Question's asked, "How  
12 about your views on it having a causal relationship to his  
13 workplace environment?" Answer, "We discussed the problem he  
14 was having at work in each of the notes and whether he was  
15 having more troubles or less troubles at work." Then he goes on  
16 to say, "He comments" -- he comments, meaning Mr. Kuiper --  
17 "that a lot of these things he seemed to cluster around things  
18 he was doing at work." So it doesn't identify a cause. And  
19 these are things that the jury's already seen because I've read  
20 them those notes.

21 THE COURT: Sure.

22 MR. PAGLIARO: Mr. Kuiper reporting that, you know, it  
23 was something to do with his work environment.

24 THE COURT: Mr. McClain, do you see any problem with  
25 it?

1 MR. MCCLAIN: No, I think that's within the ambit of  
2 what you were talking about. That's in his notes.

3 THE COURT: Okay.

4 MR. MCCLAIN: That's within his treatment. That's not  
5 an outside opinion about causation.

6 THE COURT: Okay. And the defense was just trying to  
7 be extra cautious, so I appreciate that.

8 Ready for the jury?

9 MR. PAGLIARO: Yes, Your Honor, we are now.

10 THE COURT: Thank you.

11 MR. PAGLIARO: Yes. Thank you.

12 (The jury entered the courtroom.)

13 THE COURT: Thank you. Please be seated.

14 And, Mr. Pagliaro, we're going to play some video  
15 depositions now?

16 MR. PAGLIARO: Yes, Your Honor.

17 THE COURT: Okay. And would you just announce kind of  
18 what it is that the jury will be seeing?

19 MR. PAGLIARO: I certainly will, Your Honor.

20 THE COURT: Thank you.

21 MR. PAGLIARO: The first deposition they're going to  
22 see is a deposition of one of Mr. Kuiper's treating physicians,  
23 Dr. Oggel. I believe we've heard his name before, Your Honor.

24 THE COURT: Yes. Okay. Thank you.

25 MR. PAGLIARO: You're welcome, Your Honor. Thank you.

1           (Videotaped deposition excerpts of James Oggel taken  
2 May 22, 2007, were played in open court.)

3           MR. PAGLIARO: That completes that, Your Honor.

4           THE COURT: And, Mr. Pagliaro, do you have another  
5 videotaped deposition you're going to be playing?

6           MR. PAGLIARO: One more, Your Honor.

7           THE COURT: Yes.

8           MR. PAGLIARO: That would be, again, referred to in  
9 Dr. Oggel's deposition, Dr. Ross Bacon, the pulmonologist  
10 Mr. Kuiper was seeing.

11          THE COURT: Okay. Thank you.

12          MR. PAGLIARO: Thank you, Your Honor.

13          (Videotaped deposition excerpts of Ross Bacon taken  
14 May 22, 2007, were played in open court.)

15          THE COURT: Why doesn't everybody take a stretch  
16 break.

17          MR. PAGLIARO: I'll find my next witness.

18          THE COURT: You need a recess?

19          MR. PAGLIARO: I just want to find my next witness. I  
20 think he's out in the hall. Is that okay?

21          THE COURT: Oh, oh, I'm sorry. Your next witness,  
22 yes.

23          MR. PAGLIARO: Want to make sure nobody's kept  
24 waiting.

25          THE COURT: Thank you.



1 MR. PAGLIARO: No problem.

2 MR. MCCLAIN: Your Honor, I'm just going to step in  
3 the hall. They can call him and start. I just need to step out  
4 in the hall.

5 THE COURT: Okay.

6 MR. MEADOR: Are we still stretching, or are you  
7 waiting for me?

8 THE COURT: I'm waiting for the witness.

9 Would you raise your right hand, please.

10 LAWRENCE REPSHER, DEFENDANT'S WITNESS, SWORN

11 THE COURT: Okay. Please be seated over there. And  
12 you can adjust the chair and the microphones so you can speak  
13 directly in the microphones. And when you're settled in, would  
14 you tell us your full name, please.

15 THE WITNESS: Lawrence Harvey Repsher.

16 THE COURT: And can you spell your last name, please.

17 THE WITNESS: R-e-p as in Paul s-h-e-r.

18 THE COURT: Thank you.

19 Mr. Meador?

20 MR. MEADOR: Thank you, Your Honor.

21 DIRECT EXAMINATION

22 BY MR. MEADOR:

23 Q. Dr. Repsher, what is your occupation?

24 A. I'm a physician.

25 Q. And do you specialize in any particular area?

1 A. Yes, in internal medicine. I subspecialize in the field of  
2 pulmonology.

3 Q. And can you explain what those fields of specialization  
4 are, please?

5 A. Internal medicine is the medical diagnosis and treatment of  
6 diseases of the internal organs. Pulmonology is the medical  
7 diagnosis and treatment of diseases of the chest including the  
8 lungs and the right-hand half of the heart.

9 Q. Would you take us through your educational background?

10 A. Beginning when?

11 Q. After you graduated from college.

12 A. University of Rochester School of Medicine in Rochester,  
13 New York, got an M.D. degree in 1965. Then I did all of my  
14 post-graduate education at the University of Colorado Health  
15 Sciences Center in Denver, and that would have included a  
16 straight medicine internship, a internal medicine residency  
17 which was interrupted with two years in the service, one year in  
18 Vietnam, the second year in -- at Fort Leonard Wood in Missouri.

19 Then I came back to Denver to finish up the last six  
20 months of my residency. And I did a fellowship in pulmonology  
21 and critical care medicine from 1970 to '72.

22 Since then I've been in the private practice of  
23 pulmonary diseases, critical care medicine, and over the last 20  
24 years, 20-plus years, I've been subspecializing in the area of  
25 occupational and environmental lung diseases.

1 Q. And what does that mean, environmental lung diseases?

2 A. That means lung diseases that are caused by something in  
3 the workplace or in the general environment.

4 Q. And you're a board-certified pulmonologist?

5 A. Yes.

6 Q. And explain what that means.

7 A. That means that I've taken the requisite training, have  
8 been recommended by the head of my training program, and I then  
9 have passed the examination both in internal medicine and in  
10 pulmonary diseases.

11 Q. Are you licensed to practice in Iowa?

12 A. Yes, I am.

13 Q. Tell me about that.

14 A. I've been licensed in Iowa now for probably over 20 years.  
15 I haven't practiced at all in Iowa, though, for at least the  
16 last 10 or 12 years, but for some period of time I was on the  
17 consulting staff of the Methodist Hospital in Des Moines.

18 Q. And do you specialize in the diagnosis of lung disease?

19 A. I specialize in the diagnosis of lung disease and the  
20 right-hand half of the heart.

21 Q. And tell me about that experience.

22 A. Well, lung diseases can often have an effect on the  
23 right-hand half of the heart, so-called cor pulmonale, c-o-r  
24 p-u-l-m-o-n-a-l-e. Lung diseases when they become severe can  
25 affect the right-hand half of the heart.

1 Q. And are you knowledgeable about COPD and asthma?

2 A. Yes. I've been dealing with that, of course, throughout my  
3 training, even my internal medicine training. But COPD and  
4 asthma have been my main area of research interest over the  
5 past -- over -- I guess over 30 years now.

6 Q. And what kind of research have you performed the last 30  
7 years?

8 A. I've done approximately 135 to 140 studies on medications  
9 used to treat asthma and COPD. In fact, all but one of the  
10 medications that are used today are medications that I've had a  
11 major role in their clinical development.

12 Q. What type of medications are you talking about?

13 A. Talking about inhalers like Albuterol and there -- those  
14 are beta agonist inhalers. And then there's the steroid  
15 inhalers like Flovent and then the combinations like Advair.  
16 Then there's the long-acting anticholinergic medications like  
17 tiotropium or Spiriva, and we're currently now researching a new  
18 drug that is supposed to be superior to tiotropium.

19 Q. Have you testified in state and federal court?

20 A. Yes.

21 Q. In how many different states?

22 A. Well, I've testified in some role or another in probably 30  
23 different states since 1973.

24 Q. Have you been retained as an expert by the defense in this  
25 case?

1 A. I have.

2 Q. And have we paid you for your time?

3 A. You have.

4 Q. And in this case what was your assignment given to you?

5 A. Was to determine the nature and cause of the serious lung  
6 disease which is affecting Mr. Kuiper.

7 Q. And what records did you review? And they're on the screen  
8 right next to you if you need to look at that or look right in  
9 front of you.

10 A. I reviewed office records and the deposition of Craig  
11 Bainbridge, a pulmonologist; report and deposition of  
12 Dr. Parmet, an occupational medicine physician; report and  
13 deposition of Dr. Egilman, occupational physician; office  
14 records and deposition of Dr. Curtiss Farrell, former medical  
15 director of American Pop Corn Company; depositions of  
16 Mr. Kuiper; report of James Stewart, industrial hygienist;  
17 deposition of Ms. Barnes, Mr. Kuiper's daughter; and records of  
18 PFT and HRCT -- that'd be pulmonary function test and  
19 high-resolution CT scans -- of the chest, analysis performed on  
20 the direction of Randall Harrison (sic), M.D. and P.U.D.

21 Q. And before you were hired by our firm, had you followed the  
22 medical literature the last ten years dealing with bronchiolitis  
23 obliterans in microwave popcorn workers?

24 A. Yes. Just by serendipity, I was evaluating an asbestos  
25 patient at the University of Kansas using their facilities. And

1 while I was there, an old friend of mine who was on the staff  
2 there at KU was actually evaluating one of the Jasper patients.  
3 And this was like in 2001 approximately plus or minus a year.  
4 And I was very interested in that, and I have followed this  
5 particular disease and our knowledge about this disease very  
6 closely ever since.

7 Q. So you've read the literature in the area?

8 A. Yes, I have.

9 Q. And there's the reference to the Akpinar-Elci study of the  
10 Jasper workers. Could you tell me about that?

11 A. Yes. That's a study of the nine workers that have been  
12 identified up to that point at the Jasper plant, and it is a  
13 very good study, and its special reason to be is that it  
14 describes the symptoms and signs of the disease quite well.

15 Q. And what symptoms and signs are you referring to in that  
16 study?

17 A. Basically the onset of very severe and progressive dyspnea,  
18 the rapid loss -- dyspnea meaning shortness of breath; rapid  
19 loss of FEV1 which is the amount of air that you can blow out in  
20 the first second of a pulmonary function test that then  
21 stabilizes but maybe slight improvement with cessation of  
22 exposure; the presence of mucus membrane irritation of the eyes  
23 and nose, the mouth, and even sometimes irritation of the skin  
24 and skin rashes.

25 There is the history of being exposed to high

1 concentrations -- relatively high concentrations of diacetyl  
2 which is the component of butter flavoring that appears to be  
3 the most troublesome, and then the signs would be, again, the  
4 pulmonary function testing that I've alluded to before with a  
5 normal diffusing capacity and a normal chest X-ray. And eight  
6 of the eight Jasper patients who were tested with a  
7 high-resolution CT scan showed expiratory mosaic attenuation  
8 pattern.

9 Q. And what does that mean?

10 A. That means that you see -- with expiration, you see patchy  
11 areas of dark lung against a background of sort of a light gray  
12 veil of a normal lung or relatively normal lung.

13 Q. And did you review the literature with respect to  
14 agricultural exposures?

15 A. Yes. Over the last ten years or so, there's been a growing  
16 body of literature not only in the United States but around the  
17 world showing that working as a farmer or in agriculture in  
18 general is a significant risk factor for the development of  
19 COPD, that is, chronic obstructive pulmonary disease, which  
20 means that you have difficult exhaling your air after you take a  
21 deep breath.

22 Q. Now, was one of your assignments to diagnose Mr. Kuiper's  
23 medical condition?

24 A. Yes, it was.

25 Q. And what did you look at specifically to make that

1 diagnosis?

2 A. Looked at his medical records of the doctors and hospitals.  
3 I tabulated his serial lung function tests. I believe he had --  
4 at least up until now he's had a total of 15 separate lung  
5 function tests that I've tabulated chronologically.

6 Q. And you reviewed all the pulmonary function tests and the  
7 HRCT results?

8 A. I reviewed the two high-resolution CT scans of the chest,  
9 one ordered by Dr. Bainbridge, another one ordered by  
10 Dr. Hanson.

11 Q. Okay. We'll come back to that in a minute. What -- based  
12 on the literature, what are the signs and symptoms of  
13 bronchiolitis obliterans or bronchiolitis obliterans symptoms as  
14 defined in the literature with respect to microwave popcorn  
15 workers?

16 A. Well, the symptoms are essentially -- invariably they start  
17 with a persistent dry cough. They do not start with a  
18 productive cough where you cough up phlegm. They all report  
19 shortness of breath with exertion of rapid onset. And most all  
20 report eye or other mucus membrane irritation.

21 The signs are a very significant loss of FEV1, not a  
22 mild or a moderate loss but a serious, potentially disabling  
23 loss of FEV1, the amount of air that you can blow out into the  
24 spirometer in the first second as opposed to the FVC which is  
25 the forced vital capacity which is the total amount of air you



1 blow out no matter how long it takes and that that is a fixed  
2 obstructive pattern. Once you cease exposure to the  
3 butter-flavoring chemical, the amount of obstruction remains  
4 stable. There's usually a normal chest X-ray, and then we've  
5 talked about the mosaic pattern of attenuation on  
6 high-resolution CT scan.

7 Q. Before I ask your opinions, let's just back up for a minute  
8 and talk a little bit about the structure of the lung; okay?

9 A. Sure.

10 Q. This shows the lung. Can you describe what you see here?

11 A. Is there a pointer system, or I just talk about what's on  
12 the slide?

13 Q. Just go ahead and talk about it.

14 A. Okay. Oh, I guess the jury's looking at the same thing I'm  
15 looking at?

16 Q. Yes, it's right behind you.

17 A. Yeah. Oh, yeah. Okay. The white structure in the middle  
18 at the top is the voice box, the larynx, and that below it  
19 immediately is the trachea or the windpipe. And then at the  
20 bottom of the windpipe, the windpipe branches off into two main  
21 branches, the right main stem bronchus, and the left main stem  
22 bronchus, the left actually being on our right -- on the right  
23 side as we are looking at the slide.

24 And you can see now that the left main stem bronchus  
25 has branched off into a number of other smaller bronchiole

1 tubes, and we only have 2 or 3 divisions here, but actually in  
2 the live person you will have 32 divisions of the right and left  
3 main stem bronchus by the time you get out to the alveoli which  
4 are the little grape-like clusters out on the far right edge of  
5 the left lung where it says alveoli or air sacs. These alveoli  
6 are very, very small, and they are fed by the smallest of the  
7 bronchiole tubes called the terminal bronchioles. They're very,  
8 very tiny, and it doesn't take much to plug them up.

9 Q. Let me ask you this question. There's been some testimony  
10 in this case about bronchiolitis obliterans being a small  
11 airways disease as opposed to a large airways disease. Could  
12 you explain that?

13 A. Yeah. Large airways disease would be something like  
14 asthma- or cigarette smoking-induced COPD, and that affects the  
15 larger bronchiole tubes, the first five or six divisions of the  
16 bronchi, possibly a few more.

17 But when you're talking about bronchiolitis, we're  
18 talking about the bronchioles that are out in the 30 to the 32  
19 divisions. Those alveoli, even though they're very, very tiny,  
20 they are -- have a huge surface area, inside surface area. If  
21 you were to take all those billions or trillions of alveoli and  
22 lay them out on a flat surface side to side, believe it or not,  
23 they would cover the area of a doubles tennis court. Your lung  
24 has the largest exposure to the outside environment. In fact,  
25 it's not surprising at all that we can get an occasional case of

1 pneumonia by breathing in germs, but it's very surprising that  
2 we aren't all getting pneumonia every time, and the reason for  
3 that is that there are built-in defense mechanisms in the lungs,  
4 in the alveoli, and in the bronchiole tubes that catch, kill,  
5 and prevent infection as we are living in a sea of germs in the  
6 air.

7 Q. Now, there's been some testimony in this case from prior  
8 experts that bronchiolitis obliterans is an obstructive disease.  
9 Could you explain that, please.

10 A. Well, it's a disease where you have difficulty getting air  
11 out. There's obstruction somewhere in the airways whether --  
12 and it can be, you know, proximal airways, you know, the back of  
13 your throat or in your voice box or down in the windpipe or more  
14 commonly in the larger bronchiole tubes. But you can have  
15 obstruction in the very tiniest bronchioles as well, and that's  
16 what we call bronchiolitis.

17 This is to distinguish from restrictive lung disease  
18 where you have difficulty getting air in. You can get it out  
19 just fine, but your lungs are scarred and stiff because of  
20 disease of the alveoli. That's different than disease of the  
21 bronchiole tubes or even the bronchioles.

22 The interstitial lung disease or restrictive lung  
23 disease are disease of the alveolar walls which is the actual  
24 lung tissue, and as those become inflamed and then scarred, the  
25 lungs become very stiff. And the patient is not able to take a

1 full deep breath in.

2 Q. Now, are there signs or diagnostic tools that assist you in  
3 diagnosing an obstructive disease?

4 A. Yes. The signs -- the objective measurement of the signs  
5 is measuring the flow of air out of the lungs. And if the air  
6 flow out of the lungs is inhibited or diminished, we refer to  
7 that as an obstructive disease, and it can be anywhere in the  
8 bronchiole system. Can be out -- it can be, as I said, up above  
9 the voice box in the back of the throat. Can be in the voice  
10 box, or it can be all the way out to those tiny terminal  
11 bronchioles. But those are all obstructive diseases.

12 Q. Do you know Talmadge King?

13 A. Yes, I do.

14 Q. And who's that?

15 A. He's a pulmonologist who was head of one of the big  
16 programs at National Jewish Hospital and has written extensively  
17 on interstitial lung diseases and diseases of the small airways,  
18 the bronchioles. Oh, about four or five years ago, he moved to  
19 San Francisco and is chief of medicine at the University of  
20 California-San Francisco Medical School.

21 Q. Have you talked with him about microwave popcorn lung?

22 A. I have on the Internet.

23 Q. Now, we've had some testimony about spirometry, but let me  
24 just ask you a few questions here. You talked about FEV1. Can  
25 you just briefly describe what that is.

1 A. FEV1 is the test where you measure the amount of air that  
2 you can exhale through your mouth into a tube that's hooked to a  
3 spirometer and how much air you get out in the first second.  
4 You take a full deep breath in, and you blow it out as hard and  
5 long as you can, and you measure what you -- the total amount  
6 that you breathe out which is the forced vital capacity, the  
7 FVC. And what you blow out in the first second is the FEV1,  
8 forced expiratory volume 1, and that is an important number.  
9 The amount of air you can blow out in that first second  
10 correlates very well with your ability to work and enjoy your  
11 leisure time activities.

12 Q. Can you explain the test and how important and how accurate  
13 it is?

14 A. The test is -- the equipment is very accurate, but the test  
15 is difficult for some patients, and that can create problems in  
16 interpretation because the patient is asked to make a maximum  
17 deep inspiration and then to blow it out as hard and fast as  
18 they can. And it's kind of like this. (Witness demonstrated.)  
19 In other words, it's not necessarily an easy thing for a patient  
20 to do, particularly if they're ill. But what you're doing is  
21 you're comparing your patient to tables of normal which are  
22 produced by normal volunteers who are making that maximum deep  
23 inspiration and that maximum forced expiration. So not only do  
24 you have to look at the numbers, but you have to make an  
25 assessment of how well the patient was able to cooperate with

1 the testing.

2 Q. Now, we've been talking about obstructive lung diseases and  
3 bronchiolitis obliterans. Are there other obstructive lung  
4 diseases?

5 A. Yes. Probably -- I really can't say which is more common.  
6 Both asthma and COPD are very common obstructive lung diseases.  
7 Asthma affects about 6 percent of the population to some degree  
8 or another, about 17 million people in the United States. COPD  
9 is currently the fourth leading cause of death in the United  
10 States and other developed countries. COPD is chronic  
11 obstructive pulmonary disease, most commonly due to cigarette  
12 smoking. If you are not a cigarette smoker, your risk for  
13 developing COPD becomes very small. However, there are other  
14 causes of COPD including agrarian or agricultural COPD and  
15 idiopathic COPD which is quite rare.

16 Q. And what is idiopathic COPD?

17 A. I think it's probably a genetic disorder where it is a fact  
18 that when you reach age 28 or 30 every year you live you will  
19 lose about 30 cc's or one ounce of your -- of the air that  
20 you're able to breathe out forcefully in that first second. Not  
21 to worry because if you don't smoke, you won't run out of FEV1  
22 until you're about 165 or 170 years old. But there are some  
23 people because of -- presumably because of their genetic  
24 inheritance that they may lose 40, 45, 60, 75 years -- cc's of  
25 FEV sub 1 per year. And so by the time they end up to be 65,

1 75, 80, they may have run out of -- run out of lung.

2 Q. Now, can you explain what bronchiolitis is?

3 A. Bronchiolitis is inflammation, is literally inflammation of  
4 those very small bronchiole tubes way out, the 30 to 32 --  
5 second division of the branching of the bronchiole tree. And  
6 there are several different types. There's ones that were most  
7 common in the past were due to toxic gases like sulfur dioxide,  
8 nitric oxides, ammonia, and chlorine gas and things like that.  
9 And those were very severe problems often progressing fairly  
10 rapidly to death.

11 Then there's other forms that are associated with  
12 rheumatic diseases like rheumatoid arthritis or dermatomyositis  
13 or lupus, systemic lupus. There are certain drugs that can  
14 cause this. And it's -- but the main -- oh.

15 Then another important cause of bronchiolitis is  
16 having a lung transplant, and it's the major cause of death in  
17 lung transplant patients. And what is common about most of the  
18 forms of bronchiolitis obliterans is that they either rapidly or  
19 slowly progress to death. Bronchiolitis obliterans is different  
20 in that you have a chronic form. It's a chronic form in that  
21 most of the patients, once they cease exposure, will -- may not  
22 get much better, but they'll stop getting worse. And the  
23 disease doesn't seem to progress at least in most of them.

24 Q. Now, with respect to the pulmonary function tests, what --  
25 when you see the results, how do you interpret this to what

1 disease it might indicate?

2 A. Well, first you have to decide do you have airways  
3 obstruction or do you have restrictive -- have a restrictive  
4 pattern? And again, you look at the tracings, one, to help you  
5 decide whether it's obstructive or restrictive but also to help  
6 decide whether the patient was giving full effort and  
7 cooperation with the testing. Then you look for obstructive  
8 disease. You look at the FEV1, the amount of air you blow out  
9 in the first second. And if that's impaired, then that by  
10 definition is obstructive disease.

11 If, on the other hand, you have a low FVC, a total  
12 amount of air that you blow out, but -- then that would suggest  
13 that you're dealing with restrictive disease. You can modify  
14 that further by looking at the ratio of the FEV1 to the FVC.  
15 And if you have a low FEV1 with a low ratio, that is, the FEV1  
16 is only a small percentage of the total FVC, then that's  
17 diagnostic of airways obstruction.

18 On the other hand, if you have a high ratio of FEV sub  
19 1 to FVC, particularly if you have a low FVC to begin with, then  
20 that would be diagnostic of a restrictive lung problem.

21 Q. Now, you reviewed the Kanwal NIOSH report surveying six  
22 different plants?

23 A. That's correct.

24 Q. So could you tell me about that report, please?

25 A. Well, that survey also included the American Pop Corn



1 Company here in Sioux City. And they did two things. They  
2 screened the workers by a questionnaire, and then they did  
3 breathing tests on them looking to see if they could identify  
4 lung problems albeit whether they were restrictive or  
5 obstructive in the workers at these six plants.

6 Q. And what common symptoms did they find in the Kanwal  
7 report?

8 A. They looked for -- they looked for a decrease in FEV1.  
9 They looked for cough. They looked for wheezing and then the  
10 signs. They looked for reduced FEV1 and obstructive pattern.

11 Q. Now, referring to Mr. Kuiper, are there many common  
12 diseases that his medical records might reflect as possible  
13 diseases?

14 A. Yes. All these diseases under C are obstructive lung  
15 diseases. The farmers' lung is maybe the only exception because  
16 that may be both restrictive and obstructive. But inherent  
17 should be inherited there at the bottom of C.

18 But at any rate, asthma, asthma with remodeling, when  
19 you have asthma, that's an obstructive disease, but it's an  
20 obstructive disease that is part and parcel -- part and parcel  
21 of it is severe inflammation. You have a lot of irritation and  
22 a lot of irritating chemicals reduced -- produced by the body,  
23 and the reason for that is not well understood.

24 But anyway, it causes a lot of inflammation, and  
25 inflammation will end up causing scarring after a variable

1 period of time. And so although young asthmatics and new  
2 asthmatics may reverse completely with a bronchodilator like  
3 Albuterol that you inhale, but as asthma progresses -- and this  
4 is not all asthmatics, but a significant number of asthmatics  
5 who have this inflammation going on for a long time will  
6 accumulate scar tissue in the walls of the bronchiole tubes.  
7 This is called remodeling. There's actually -- you're putting  
8 new tissue into the bronchiole walls that doesn't belong there.  
9 That is scar tissue. And that will cause a relatively permanent  
10 degree of airways obstruction in a disease that initially may  
11 have been completely reversible.

12 COPD due to smoking, the irritation there is the  
13 cigarette smoke, and that causes inflammation and scarring and  
14 also stimulates the production of enzymes that are the same  
15 enzymes that are in your stomach that actually digest your own  
16 lung as you're smoking. And those -- and that is one of the  
17 most common obstructive lung diseases along with asthma. As I  
18 said, it is the fourth leading cause of death in the United  
19 States and is expected to be the third leading cause of death in  
20 the United States in another two or three years.

21 Then there's a newer form -- newer -- more recently  
22 form of COPD that's been discovered or written about, and that  
23 is agrarian or agricultural COPD probably due to chronic  
24 inflammation due to the inhalation of organic dusts and  
25 associated with the work of farming. You probably would include

1 molds and pesticides and everything else that you can come in  
2 contact with in agriculture.

3 Then there's farmers' lung which is a -- an  
4 immunologic disorder where you become allergic to certain things  
5 in the farmers' work environment and many other work  
6 environments that are nonfarming and can cause a combined  
7 obstructive and restrictive lung disease.

8 Q. Now, did you perform a differential diagnosis in this case?

9 A. I did.

10 Q. And could you explain what that is?

11 A. Differential diagnosis is where you try and determine what  
12 are the potential diseases that can explain the abnormalities  
13 that you see in a particular patient. And so what you're doing  
14 is you're entering -- entertaining a variety of particular  
15 diseases which seem appropriate to the situation, and that's in  
16 contradistinction to Dr. Egilman and Parmet who considered only  
17 one disease and then did a -- looked at the various possible  
18 causes of that lung disease, that is, bronchiolitis obliterans  
19 syndrome or BOS.

20 But a real differential diagnosis is where you  
21 consider not only the causes of a particular lung disease but  
22 where you consider a number of partic -- of lung diseases that  
23 could potentially explain the patient's symptoms and observed  
24 signs.

25 Q. Is it important to look at the complete medical history?

1 A. Certainly is. You want to perform a very thorough medical  
2 history of the symptoms. Then you want to do the appropriate  
3 lung function tests, in this case high resolution -- pulmonary  
4 tests, high-resolution CT scans, chest X-ray, and a lung biopsy  
5 which is the gold standard for diagnosing BOS.

6 Q. What do you mean by the gold standard?

7 A. Well, it's the one particular test that you can do that  
8 will tell you for almost certain whether you have BOS or whether  
9 you have some other lung disease.

10 Q. Now, if you identify an abnormal pattern in the pulmonary  
11 function test, do you need to do additional work to reach a  
12 diagnosis?

13 A. Well, you have to decide whether it's obstructive or  
14 restrictive. You'll have a different differential diagnosis for  
15 restrictive diseases and another differential diagnosis for  
16 obstructive diseases.

17 Q. And did you reach an opinion in this case as to whether  
18 Mr. Kuiper has an obstructive or restrictive disease?

19 A. He has a severe obstructive disease.

20 Q. And did you review his complete medical records?

21 A. I did.

22 Q. And did you review all his pulmonary function tests?

23 A. Yes.

24 Q. And did you review the HRCTs?

25 A. I did.

1 Q. And have you formed an opinion to a reasonable medical  
2 certainty as to when Mr. Kuiper's condition started?

3 A. Yes, I have.

4 Q. And what is that opinion?

5 A. I believe that it started -- it may have started many years  
6 ago when he was farming as a young man, but that doesn't appear  
7 to have been clinically very significant. It didn't seem to  
8 bother him that much. But when he began working in the corn  
9 crib here at APC, American Pop Corn Company, he began having  
10 very serious respiratory complaints.

11 Q. And you say the onset of the disease must be after  
12 exposure. What does that mean?

13 A. Well, you can't diagnose something as the cause of the  
14 disease if you already have the disease before you're exposed to  
15 the presumed causative agent. In other words, I mean, you can't  
16 get a disease in retrospect.

17 Q. And in formulating your opinion that Mr. Kuiper's condition  
18 preexisted his work in the mixing room, what did you find  
19 significant in the medical records?

20 A. Well, that he was found by Dr. Baller, the cardiologist, to  
21 appear to be short of breath in 1988, 1989; by Dr. Farrell,  
22 short of breath since 1988; Dr. Zuehlke, another cardiologist,  
23 short of breath since 1988. His daughter, Ms. Barnes, observed  
24 him to be so short of breath that he could no longer mow the  
25 lawn in 1990. And Mr. Hoffman found him to be short of breath

1 in 1989. And then in his own -- when he answered the NIOSH  
2 questionnaire for the Kanwal study, he indicated that he'd been  
3 short of breath since 1989.

4 Q. And there's a reference to chronic bronchitis. What  
5 significance does that have?

6 A. Well, he was -- consulted doctors in 19 -- in August of  
7 1988, June 1990, and November 1990 with complaints of chronic  
8 bronchitis and was actually recommended that he be admitted to  
9 the hospital, although he refused to do that.

10 Q. Now, did you continue to evaluate whether or not Mr. Kuiper  
11 was exposed and suffered lung disease while working in the  
12 mixing room?

13 A. Yes.

14 Q. And what did you do in that regard?

15 A. Well, I looked at his lung function tests over time.

16 Q. And why did you do that?

17 A. Well, because that is objective testing that will tell you  
18 whether he's getting worse, getting better, or whether his lung  
19 function variables, parameters, are getting both worse and  
20 better at various times. And he --

21 Q. And what'd you find out in that regard? Sorry. I was  
22 getting a drink of water.

23 A. Well, his lung function tests didn't have any particular  
24 trend. They were both up and down while he was in the mixing  
25 room. And indeed they appeared to get significantly worse after

1 he left the mixing room.

2 Q. And is that result inconsistent with the medical  
3 literature?

4 A. Well, yes, because the patients that are described by  
5 Dr. Akpinar and the other patients that have been described in  
6 England and the Netherlands, out in California is that the  
7 patients stabilize, maybe even slightly improving a little bit  
8 after cessation of exposure. So this would not be at all  
9 consistent with BOS.

10 Q. And if he was exposed to microwave butter popcorn causing  
11 lung disease during the '92 to '96 time period, what would you  
12 expect the PFTs to look like during that time period?

13 A. Well, you would expect him to have a rapid decrease in his  
14 FEV1 that would become severe, probably making him disabled to  
15 continue to work, and then the results would remain stable  
16 thereon. They wouldn't go up or down.

17 Q. Now, is your opinion on the fact his PFTs were stable while  
18 he was in the mixing room, is your opinion consistent with any  
19 other expert in this case?

20 A. Yes, Dr. Parmet indicated that he was stable between '92  
21 and '96, although I would disagree with him to the point that  
22 they weren't exactly stable. They were -- he had what we call  
23 stable instability. In other words, his values, his results on  
24 each lung function test, would be up and down, but they would be  
25 up and down kind of around a median value. But there was no

1 trend either upwards or downwards until actually he left the  
2 mixing room and then for some reason started to deteriorate.

3 Q. And is your opinion consistent with Dr. Farrell's  
4 observation that Mr. Kuiper was stable during the 1992, '96 time  
5 period?

6 A. Again, if you qualify that by saying he had stable  
7 instability, yes.

8 Q. And I want you to assume hypothetically that Dr. Egilman  
9 agreed with Dr. Parmet that Ron was relatively stable in the  
10 mixing room during the '92 to '96 time period. Would that be  
11 consistent with your opinion in this case?

12 A. Yes.

13 Q. And as you sit here today, do you have an opinion to a  
14 reasonable medical certainty as to whether Mr. Kuiper was  
15 injured while working in the mixing room at American Pop Corn?

16 A. I do have an opinion.

17 Q. And what's that opinion?

18 A. That I don't believe that he was. His serial pulmonary  
19 function tests did not progress the way they do with classic  
20 BOS.

21 Q. And were the symptoms he reported inconsistent with  
22 literature?

23 A. Yes. He denied any mucus membrane irritation, and there's  
24 no evidence that he was exposed to high concentrations of  
25 diacetyl. Indeed the Kanwal study showed that the APC plant was



1 a remarkably clean plant with regard to exposure to butter  
2 flavorings.

3 Q. And what do you mean remarkably clean?

4 A. Well, that the concentrations that were measured were very,  
5 very low.

6 Q. And you talk about most reported other mucosal irritation.  
7 What are you referring to?

8 A. Irritation of the eyes, the nose, the mouth, and the skin.  
9 He also did not have a persistent dry cough. He had a cough --  
10 when he complained of cough, he complained of a productive cough  
11 which is not seen in BOS.

12 Q. And was Ron Kuiper reporting a persistent eye irritation  
13 while he worked in the mixing room at American Pop Corn?

14 A. No.

15 Q. And how about mucosal irritation?

16 A. No. He specifically denied it. And then as I already  
17 stated, his loss of FEV sub 1 was chaotic and basically stable  
18 around a median, but it was not the rapid loss that you see with  
19 BOS. And he did not have a fixed obstructive pattern on his  
20 spirometry. He had a very variable obstructive pattern, very  
21 obstructed on one day and much less obstructed on another day.

22 And then finally, he did not evidence the mosaic  
23 pattern on the high-resolution CT scan. And that seems to be --  
24 I mean, you can have a mosaic pattern on a high-resolution CT  
25 scan. If you're normal you can have it in a cigarette smoker,

1 but it appears that all or most all of the patients that are  
2 felt to have -- or workers who are felt to have BOS do have a  
3 mosaic attenuation pattern on their HRCT.

4 Q. And did you review HRCT scans in this case?

5 A. I did.

6 Q. And you reviewed two?

7 A. That's correct.

8 Q. And which ones were they?

9 A. Dr. Baneberg's (sic) and Dr. Hanson's.

10 Q. And when was -- Dr. Bainbridge, when was that HRCT?

11 A. One was in 2005, and the other was in 2007. I believe  
12 Dr. Hanson's was in 2007, and they were both negative for a  
13 mosaic pattern.

14 Q. And when you say negative, what do you mean by that?

15 A. It wasn't there. You could not see the mosaic pattern on  
16 the X-ray film.

17 Q. And what significance does that have in diagnosing  
18 bronchiolitis obliterans?

19 A. Well, that is generally recognized as one of the cardinal  
20 features of BOS.

21 Q. So does that mean you would rule that out as a diagnosis in  
22 this case?

23 A. I would, yes.

24 Q. And I take it --

25 A. Particularly when he has no other evidence of BOS.

1 Q. And I take it you disagree with Dr. Parmet and Dr. Egilman  
2 on this point?

3 A. Yes, I do.

4 Q. And why is that?

5 A. Well, I just believe they're wrong. I mean, you can't  
6 argue with -- you know, the radiologists and the doctors that  
7 have reviewed those HRCTs all agree that they're negative. And  
8 I certainly concur that they're negative.

9 Q. Now, you reviewed -- let me -- hold on. You talked about  
10 the mosaic pattern, and I've put up on the board a mosaic  
11 pattern in the HRCT. Could you describe that, please?

12 A. Well, if you look at that, you'll see that most of the  
13 X-ray looks like a thin veil of light gray, particularly around  
14 the outside edges, and it -- more in the center you will see  
15 irregular areas of darker lung tissue, and that's darker because  
16 it's obstructed and there's air trapped in there.

17 So as you expand the lung, it -- it's mostly -- it has  
18 more and more air in it and less and less lung tissue to stop  
19 the X-rays. So it will -- the part that has the -- is  
20 hyperinflated will look darker on the X-ray, and that's evidence  
21 of air trapping in the small bronchioles.

22 Q. Now, you indicated there's a 2005 HRCT? That was  
23 Dr. Bainbridge?

24 A. That was Dr. Bainbridge's, yes.

25 Q. And then you reviewed one in 2007. Where was that from?

1 A. That was from the Iowa Lung Center in Des Moines, I  
2 believe.

3 Q. And what's the difference between the expiratory and  
4 inspiratory HRCT?

5 A. Well, with the way it works with the small airways, when  
6 you have the inspiratory phase, you kind of open up those  
7 tiniest little bronchioles so that you can get air that will go  
8 out them, out past them out into the alveoli. And so the lung  
9 will look uniform. You won't have those dark areas which we see  
10 here kind of in the center of the lungs. But then if -- and so  
11 it will look normal on the inspiratory film.

12 But when you try and blow out or when you have the  
13 patient blow out to full expiration, the relatively normal lung  
14 will still look slightly gray, whereas the hyperinflated trapped  
15 lung that has air trapped in it will look dark because the X-ray  
16 beam can go through there easier than it can go through the  
17 normal lung.

18 Q. Now, the -- there's been some testimony about Jasper. Did  
19 they take HRCT of all the workers that were identified with  
20 popcorn lung at Jasper?

21 A. Took HRCT of eight of the nine workers.

22 Q. And what were the results of those HRCTs?

23 A. All eight of them were positive.

24 MR. MEADOR: Your Honor, would this be a good time to  
25 take a break?

1 THE COURT: It would be. Thank you.

2 Members of the jury, it's 2:30, so that's going to  
3 conclude the evidence for today. Please keep an open mind until  
4 you've heard all of the evidence in the case. And after I've  
5 had a chance to consult with the lawyers today, I'll give you an  
6 update on where I think we're going this week and when I think  
7 the case will go to the jury. Thank you. We'll see you  
8 tomorrow morning at 8:30.

9 (The jury exited the courtroom.)

10 THE COURT: Thank you. Please be seated.

11 What's the schedule look like? Yes.

12 MR. PAGLIARO: I think it's good news, Your Honor.  
13 Dr. Repsher, then we're going to have Dr. Bainbridge who we  
14 talked about last week and then Dr. Stewart, and then we're  
15 going to be done.

16 THE COURT: Oh, okay.

17 MR. PAGLIARO: So I think my -- I talked to  
18 Mr. McClain at the break, and, you know, I think at our current  
19 pace we may be done end of the day tomorrow but certainly by the  
20 beginning of the day Thursday. I expect we'll be done. We may  
21 read some documents in and things like that, but it's pretty  
22 much a wrap after this witness and two others.

23 THE COURT: Okay. Do you anticipate much rebuttal, if  
24 any?

25 MR. MCCLAIN: Short.

1 THE COURT: So, Mr. McClain, when do you think we'll  
2 be totally finished with all the evidence?

3 MR. MCCLAIN: Thursday.

4 THE COURT: What time on Thursday do you think?

5 MR. MCCLAIN: Depends on what time they get done in  
6 the morning, but my rebuttal would be in total less than an hour  
7 and a half.

8 THE COURT: Well, are you going to want to argue it on  
9 Thursday or argue it on Friday? I guess that's really my  
10 question.

11 MR. MCCLAIN: Probably my preference would be to argue  
12 it Friday morning.

13 MR. PAGLIARO: I think we could do it on Thursday,  
14 Your Honor. Jury's been sitting a long time.

15 THE COURT: Well, I'm not sure we'll get it done on  
16 Thursday, and, you know, depending on when we finish on  
17 Thursday -- well, maybe we'll be in a better position to know  
18 tomorrow.

19 MR. PAGLIARO: Tomorrow afternoon, Your Honor, we may  
20 have a better sense. We may finish tomorrow afternoon. It's  
21 possible. That's possible. I don't want to make too many  
22 promises. I'm doing the best I can.

23 THE COURT: Sure.

24 MR. PAGLIARO: But it's a possibility.

25 THE COURT: Would the lawyers be able to meet me back

1 here at four o'clock? I had a damages hearing in a civil case,  
2 but I just got word the parties resolved it. I'm working on the  
3 instructions. I've got some changes including incorporating at  
4 least one clarifying instruction that you raised in what you  
5 filed late yesterday or this morning or whenever you filed it on  
6 the jury instructions. I'm talking about the defense now.

7           So if we're going to -- you know, if there's a chance  
8 we're going to be arguing it on Thursday, we need to get any  
9 supplemental instructions resolved. I'm not saying we'll get it  
10 resolved today. I don't expect to get it resolved today, but  
11 I'd at least like to disclose to you all where I'm coming from.

12           You can have the evening to think about it, and then,  
13 you know, at some point we're going to -- I have to make a final  
14 decision, and I need to make sure you have an opportunity to  
15 make whatever record you want to make before we argue it.

16           So would that be possible to meet me back here?  
17 Matter of fact, I think at 3 -- I've got a sentencing at 3. I  
18 guess they're calling a witness or two, but it should be done by  
19 3:45 or so, so you want to do it at -- as soon as that  
20 sentencing is done, that'd be great.

21           MR. PAGLIARO: Whenever -- whatever's good for you.

22           THE COURT: Okay. So it will probably be -- I won't  
23 start without you. How's that? I'll see you back here later.  
24 We'll be in recess.

25           MR. PAGLIARO: Thanks, Judge.

1 (Recess at 2:34 p.m.)

2 THE COURT: Thank you. Please be seated. Here's what  
3 I'm going to do. I have three revised instructions, and I'm  
4 going to pass out the proposed instructions. And then just to  
5 memorialize it, I'm entering a written order, and then we can  
6 take it up tomorrow morning, and you can make your objections to  
7 it, try and talk me out of it, but I'm pretty -- pretty well set  
8 on going with these short supplemental instructions.

9 Any more thought about arguing on Thursday? Who's  
10 going to give the closing for the defense?

11 MR. PAGLIARO: I will, Your Honor. I will.

12 THE COURT: So you think you'll be ready to go?

13 MR. PAGLIARO: I think we -- make sure to use the -- I  
14 think reasonably we might be done the end of the day tomorrow  
15 or, you know, pretty early on Thursday. Now, I don't know  
16 what --

17 THE COURT: What if we did this? What if we're  
18 done -- if we're done the end of the day tomorrow, then that  
19 will be pretty easy. I mean, we can maybe start a little later  
20 and do closings on Thursday. If we don't finish tomorrow and we  
21 have some overlap on Thursday, what if we took like a two-hour  
22 recess so that would give you tonight, tomorrow, and then a  
23 couple hours on Thursday to get ready to give the closing?  
24 Mr. McClain, you look pretty tired.

25 MR. MCCLAIN: Yeah, but that's fine. I mean, we don't



1 need a two-hour recess. I got a lot --

2 THE COURT: Well, I always try and give the lawyers a  
3 couple-hour recess to get ready -- if we -- you know, I try and  
4 time it so they could do it first thing in the morning, but it  
5 doesn't always work that way.

6 MR. MCCLAIN: How much time are you giving us?

7 THE COURT: How much time would you like?

8 MR. MCCLAIN: 45 minutes, split 30 -- 35 and 10 or  
9 something like that.

10 THE COURT: Mr. Pagliaro, I think you'd like a little  
11 more time.

12 MR. PAGLIARO: I thought we were going to get an hour,  
13 Your Honor, but . . .

14 THE COURT: You know what? You want no holds barred,  
15 World Federation of Wrestling rules, no time limits?

16 MR. MCCLAIN: Sure. Fine with me.

17 MR. PAGLIARO: I'd rather have a time limit, Your  
18 Honor. I mean, that's just -- I mean, just give some discipline  
19 to the process and makes people sort of focus.

20 THE COURT: How about this? You don't have to use it  
21 all. How about an hour and 15 minutes per side, and I'll give  
22 you a very friendly reminder at an hour? I'll just say you're  
23 an hour into the argument.

24 MR. PAGLIARO: That's perfect, Your Honor.

25 THE COURT: Okay. And then it will -- yeah. It will

1 be -- yeah. You know, but what do I do after 15 minutes? Do I  
2 say your time's up and make you sit down? I think I'll say your  
3 time's up. Would you please wrap it up, and then you'd have --  
4 I don't want to stop you in mid-sentence.

5 MR. PAGLIARO: That'd be fine.

6 THE COURT: Even as mean and tough as I am, I don't  
7 want to do that to you because I want you to -- you know, I want  
8 you to -- I don't want to interrupt your argument. So why don't  
9 we do kind of a soft hour and 15 minutes with a friendly  
10 reminder at one hour. And then at 15 minutes -- at an hour and  
11 15 if you're still going which hopefully you won't be, I'll just  
12 say you need to try and wrap it up, something like that. How's  
13 that?

14 MR. PAGLIARO: That's very fair, Your Honor. Thank  
15 you.

16 THE COURT: Okay. Let me pass this out. Then you can  
17 have the night to think about it, and we can talk about it  
18 tomorrow.

19 See you tomorrow. I think if we meet at eight -- do  
20 you think 30 minutes will be enough to talk about the  
21 instructions do you think?

22 MR. DONOVAN: I would think so, Your Honor.

23 THE COURT: Okay. Why don't we meet at eight o'clock  
24 then; okay?

25 MR. PAGLIARO: Thanks, Judge.

1 MR. DONOVAN: Thank you, Your Honor.

2 THE COURT: Thank you.

3 (The foregoing trial was  
4 adjourned at 4:01 p.m.)  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20

21 CERTIFICATE

22 I certify that the foregoing is a correct transcript  
23 from the record of proceedings in the above-entitled matter.  
24  
25

1	<u>S/Shelly Semmler</u>	<u>3-28-09</u>
2	Shelly Semmler, RMR, CRR	Date
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		

INDEXWITNESS :PAGE :

NANCY HIGLEY	
MR. MEADOR	1152
MR. MCCLAIN	1160
MR. MEADOR	1203
DAVID BRATTON	
MR. PAGLIARO	1214
MR. MCCLAIN	1233
MR. PAGLIARO	1245
GREGORY HOFFMAN	
MR. PAGLIARO	1249
MR. MCCLAIN	1266
MR. PAGLIARO	1280
VIDEOTAPED DEPOSITION	
James Oggel	1292
Ross Bacon	1292
LAWRENCE REPSHER	
MR. MEADOR	1293

\*\*\*\*\*

EXHIBITS :

717	1179
2214	1273

\*\*\*\*\*